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Military Miniatures

IN REVIEW

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The Cromwell VK 4502

Commander's Rail Tender

DREAM MACHINE: Tamiya's 223 gets all the fixins

Picasso's Panzer: DML's StuG G gets a makeover

T-26 Redeux: the new Italeri/Zvesda offerings

Sea ya later! Cromwell's LVT-4

Accurate Armour's cool Centurion MkII ARV

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No. 21

MILITARY
Miniatures
★ ★ ★ ★ ★ ★ IN REVIEW ★ ★ ★ ★ ★ ★

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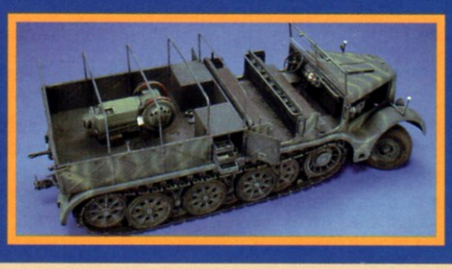
ON THE COVER:

Tamiya throws the German armor guys a bone with this huge hunk of styrene (we know it was tough getting over last year's Dragon Wagon). The kit may be expensive ($82.00), but we'd still bet there will be a stampede at the hobby shop! Coverage begins on page 43.



From Your Editor

I rant, therefore I am (ranting)

I was musing about history the other day, as I sometimes do. I'm not a historian (but I do play one on TV), but I do get exposed to a fair amount of historically oriented material. I guess you could call me an armchair historian (?).

What I was musing about was the rather absurd notion that the Allied victory in Europe was primarily due to airplanes and that the large number of Allied aircraft was somehow "unfair." It is an absurd notion and I find it compounded by some fairly credible sources. One is the oral histories of the German vets themselves. I have read a fair number of accounts that state the Allies never could have beaten them, if it were not for all those damned airplanes. Although the airplanes helped a lot, it was the grunts that took the ground. This is directly related to one of the other big myths of WW2: that the Sherman was a huge hunk of junk and it took Allied airplanes to knock out German tanks because the Sherman could not. Allow me to rant about this for a few paragraphs.

First, those damned airplanes (excuse me for discussing this at length). The creation of the Allied "air armada" has a somewhat interesting history. Like the rest of the world in the thirties, both the U.S. and Britain were busy with the formation of their concept of the modern air force. All this was rather rudely interrupted by the opening phases of WW2. During this unhappy time, both the Japanese and the Germans were delivering a proper pasting to us in the skies. The Axis learned (in their separate ways) that one of the keys to modern warfare was command of the air. In Asia, the Japanese quickly established their superiority in the air and this was a major contributing factor in their initial string of victories. On the other side of the globe, although the British had emerged victorious from the air battle over their island, it was not without severe and difficult to replace losses. Our entry into the war in the west meant tangling with the Luftwaffe on a regular basis in Tunisia and Italy, where we did not establish air superiority until much, much later. We had our share of ass-whippings during this time.

The Luftwaffe was a much feared and respected force and the allies had some very difficult lessons to learn. And you know what? We learned them very well. Allied fighter pilots accounted for 2,262 German fighters downed between January and June of 1944.

This is summed up in a rather interesting and telling anecdote from the days just after the Normandy invasion. Eisenhower's son had graduated from West Point on June 6th and within a week or so he had joined his dad on the invasion beaches where the substantial build-up of men and supplies was taking place. Noticing how close together the trucks leaving the beaches where (which was contrary to Army regulations), he remarked to his old man, "You'd never let the trucks get that close, if you didn't have air superiority." To which Eisenhower replied, "Son, if I didn't have air superiority, I wouldn't be here!" Right on, Ike. Basically, the Brits and the Americans had busted a hump to ensure that we would be able to kick the living crap out of the Luftwaffe in Northwest Europe when the time came.

Secondly, those damned tanks. Many of the comments I read by German vets regarding the Sherman seem to smack a bit of sour grapes. The gist of it is that a Sherman could never knock out the vaunted Panthers and Tigers and that it took an airplane like a Typhoon or a Thunderbolt to do it. Poppycock. It is true that the U.S. infantry was out gunned on the ground in the ETO, with each rifle company only having three machine guns versus the German rifle company's fifteen. But when the infantry needed a hand, it wasn't tac air they called on, it the was the awesome power of the artillery (definitely not enough room here to expound on that).

The tank myth is further compounded by a slew of incorrectly captioned Signal Corps photos from WW2 that often state "such and such" a tank was knocked out by Allied fighter bombers. I always find these captions a bit amusing, especially when there are one or two vertical holes in the sides of the tanks. That'd be a neat trick for a plane. I think that in many of these oral histories, even the ones written fairly recently, the Germans still don't like admitting that we beat them. Understandable, perhaps, but not exactly factual.

The fact of the matter is that Sherman tanks knocked out German tanks (it has a nice ring to it doesn't it?). Yes, the Sherman had a thinner skin and, yes, it had a less powerful gun. But sometimes contemporary WW2 armor literature glosses over one simple, minor fact: the Allies won WW2 (it was in all the papers), and we won it with the Sherman. No matter how many stories are written about poorly trained Sherman crews getting walloped by the big German cats, sooner or later Allied tankers got it together and engaged German armor one on one—and won. I don't have the space to expound on it here (again), but a great example is U.S. tank ace Lafayette Poole. He and his crew knocked out in excess of 250 German armored vehicles between July and November 1944. Believe it or not, a great number were Panthers. The army was so impressed with the experience of Poole and his crew that even after he was severely wounded, the army refused to discharge him. After recovering from his wounds, the army kept him on to advise and train new crews, even after the end of the war.

An interesting thing, in my opinion, was going on in armor technology in the mid 1940's. To me it appears that tank technology was way behind anti-tank technology, in spite of all the strides by the Germans. Case in point: the bane of Allied tankers in Europe was the Panzerfaust. This inexpensive (cheap really) anti-tank weapon could easily punch a hole in a Sherman. Virtually anyone, with a few minutes of training, could fire it. Pimply faced teen scratches one highly trained crew.

A lot of folks don't realize it, but the lowly Panzerfaust could also quite easily punch a hole in a Tiger II, even from a modest range. This is an interesting point when pondering the question of the earlier introduction of the Pershing into the ETO. Although it would have brought a better gun, it's skin, although thicker, would have been no less immune to the German WW2 generation of anti-tank weapons.

This is certainly the subject for a much larger space. I only have one page! So much for the rantings of an armchair historian.

Come on in

Hey, wipe your feet and come on in to issue 21. Some interesting stuff herein. We've got the big, big FAMO for all to see (and yes, I hogged it—editor's prerogative), as well as a few other interesting items. A couple of new dudes are present as well. We have been receiving a lot of response to our earlier requests for new contributors. We thought we'd kick this off with a couple of unusual subjects, too.

Kick off your shoes and get started!

—Pat Stansell

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The Mail Sack

Track Cracks

Your readers who model Vietnam M113 variants might be interested to know of the field expedient of turning the exhaust stack to point forward.

This directed exhaust gases away from the crew compartment and allowed helicopters and spotter aircraft to see the forward-most vehicles, which often placed a smoke grenade beside the forward-aimed exhaust.

Keep up the great work. The definitive resource on armor in Vietnam is Simon Dunstan's book *Vietnam Tracks.*

—Reed R. Treible

✉

Knock, knock...

The "vent panels" seen on U.S. military tactical vehicles lately are actually designed to show up in thermal sights. I haven't seen them up close, but I assume they're made of some durable non heat-absorbing material like fiberglass. The louvers keep heat from building up behind the panel and reducing the thermal contrast. When viewed through a thermal sight they stand out as "cold spots" that identify the target as "friendly-don't shoot." They do mount with Velcro strips and can be removed, but they're not rotated, as many are rectangular, not square.

These were developed after several tragic incidents during the Gulf War in which friendly vehicles were killed by adjacent or supporting units. It seems that we fell in love with the technology and failed to remember that a fallible human gunner still has to decide whether or not to pull the trigger. That gunner, who hasn't had much sleep, is probably juiced up on adrenaline and cold MRE coffee and has been jostling around hunched forward squinting into his TTS for three or four hours. Under those conditions, it can be really difficult to discern whether that little green blob at thirty-five hundred meters is a T-72 or an M-1 or a crashed UFO (they're here, you know). With the one-shot lethality of modern weapons, the days of "Oops! Sorry, thought you were someone else" are over.

—Keith Vreeland
Sgt./Intelligence
50th Bde./42nd ID

✉

AMGU to you, too

So when is the second *Modeler's Guide to the Universe* coming out? In the first version, you did a short piece on page 81 about Revell-Monogram, but you didn't mention Revell-Germany. Are you going to list their 1/35 scale kits in the second MGU? And please, next time, leave out the MRC helicopters (page 65)! I know Air Cavalry guys like to pretend that they are horse cavalry heirs, but a helicopter (even in 1/35 scale) is an aviation topic, and it belongs somewhere else.

—fulks@mindspring.com

Funny you should mention it, but that's what the airplane guys said... 1/35th scale helicopters are just that—1/35th scale. "Somewhere else" is AMGU, the guide is for all 1/35th scale vehicles and accessories. The only thing in 1/35th scale we deliberately left out is the Tamiya line of dinosaurs!

The reason Revell of Germany was left out was that at the time we prepared the book, they offered no original armor kits. The Revell of Germany 1/35th scale armor line was originally created to provide a familiar label to the line of Dragon armor kits. This later included a permutation of an AFV Club kit (the Scorpion). It wasn't until last year that their newly tooled Marder migrated to these shores. Since then, we've had the FUCH, LUCHS and now, the Haubitze 2000, so they will have a place in the next AMGU.

And speaking of, to answer your question, we are planning another guide in the year 2000. Probably around the middle of the year, or so. The project is a massive one, so exact timing is difficult. The 2000 book will be expanded to include additional product info and perhaps other scales, as well.

✉

Yen Bends

The price for the Famo seems kind of high, as it is listed for 5300 yen in Japanese hobby magazines. That works out to around $50.00 or around $72.00 Canadian. Even with the cost of shipping from Japan, that's still cheaper than the U.S. or Canadian suggested retail price. What's up with that?

—R. Hebert

We agree that the price disparity is a bit on the high side. However, remember that Tamiya America is a completely separate company and must, in effect, buy the kits from Tamiya Inc. (Japan). Therefore, the negotiated price must reflect the current trend of the foreign currency against the domestic one (which lately is up). The time from negotiation to delivery is sometimes several months and this is also factored in.

Bear in mind, also, that ordering directly from overseas does not include the cost of customs clearance and duty, which a large company like Tamiya must pay (individuals purchasing product for their own use can squeak by on this). They are a registered importer of foreign goods and must comply with all U.S. regulations. We're not certain of Tamiya, but many other companies who import goods from overseas use a customs broker for smooth delivery from the port to the warehouse. All this adds to the cost and this is, naturally, passed on to the consumer. Comparing the cost of a domestically produced product to an imported one is definitely comparing "apples to oranges."

There is an even greater price disparity in Europe, where the retail price must reflect the currency trends of at least three different countries, plus shipping, duties and taxes.

The current line of Tamiya kits is broadly discounted in the U.S. If you check around, you can usually find a kit well below its listed retail. The Dragon Wagon is a case in point.

✉

Hank cranks—has the Blues, too

I just read your article on the Elvis Tank and was quite pleased. I'm in the process of using the CMD conversion to build my dad's command tank in the 3AD at that time (and I was doing an article for MMiR), but... he who hesitates is lost—LOL!! It's about time somebody else discovered USAREUR armor in the 50s. Most US armor officers will tell you that USAREUR up until '65 was the pinnacle of US armor professionalism. They got the best equipment and people; and... the mission was real. The Bad Guys were only 50 klicks to the east.

I commend you on the model. It is excellent! When I first read the article, I thought you had screwed up on markings, but I dug into my magic chest of 3AD photos—now I think you and I may have stumbled upon a mystery. My thoughts, by topic:

ELVIS. Contrary to popular belief, Elvis was not a tanker. He was a recon scout (read M-38 recon jeep driver) in Scout Platoon, 32 Armor (can't remember if it was 1st or 2d Battalion, but he was at Friedburg). I used to see him every Saturday at the PX, with a hoard of girls/phalanx of MPs in tow. My dad swore 'til the day he died, that Elvis was a great soldier. In the closing days of his tour, he became the battalion CO's jeep driver (a BIG deal). Could you see today's rock stars serving in the Army? NOT!

THE MOVIE. Hate to break your heart, but all those tanks you loved are actually 2d Armored Division (at Fort Hood, Texas), painted to resemble 3AD vehicles. The movie was filmed on Hollywood sets and Fort Hood. The only scene filmed in Germany was the scene showing the GIs being briefed by an officer before they go on pass—that was filmed in front of the Bahnhof in Frankfurt AM.

MARKINGS. In 1958, the 3AD got a new CG and went to CARS. New tactical recognition devices were devised for each 3AD subordinate unit. Reason—put 500+ look-alike armored vehicles on a

battlefield, nobody can tell who's who. They are excellent for grouping/re-grouping. It always irks me that "know-it-all" (read: never served in a tank company) armor historians talk about these markings as "excellent aiming points." They always love to cite that picture in the Squadron Sherman book that shows an M-4 (being recovered) with two perfect 88 holes near the star. What horse shit!! The Army conducted 2 studies, and found that in European terrain/weather, markings blur at 500 meters, and beyond 800 meters are not visible. Contrary to popular belief, a tank gunner in combat does not have the luxury of sitting around, casually "plinking" at aiming points. What the Sherman picture does depict is excellent gunner training. Tankers are taught to shoot for CENTER MASS OF TARGET. In this case, the 88 (being a hypervelocity weapon) did exactly what it was supposed to do. It put the rounds right where the gunner was taught to send them.

Here's where the mystery of your markings begins. In '58, each unit in 3AD got a unit geometric device. Yellow devices for armor, blue for infantry and red for artillery.

1 Cav (Med Tk) - yellow triangle
13 Cav (Med Tk) - yellow rectangle
32 Armor (Med Tk) - yellow circle
33 Armor (Med Tk) - yellow diamond
12 Cav (M-41/Recon) - yellow octagon
A Co - red numbers (on the shapes listed above)
B Co - black numbers
C Co - green numbers
D Co - black outline numbers

In my dad's 3AD yearbook, EVERY photo of the 32d shows yellow circles. Then I found the enclosed photo in my drawer. It appears the 32d tank has a red circle. My only thought is that this is one of those black and white photos which fades and depicts yellow as a dark color. But... the Army cooperated very closely in making GI Blues, so I'm not sure if they would have put the wrong colors on the tanks at Hood (but then again, the Army is known to f-up with alarming frequency—LOL).

THE TANK. Two tiny complaints. No vane sights in front of the loader's hatch and no canvas ballistic shields. General Bruce Clarke (of WWII 4AD fame) was the USAREUR CG at the time and detested the shields. They faded, they rotted, they sagged, they tore. He hated them, and in official decree, required that they be removed from all USAREUR tanks because of their "un-military appearance."

Since my dad's tank did not have the canvas shield, I used the mantlet from the old Monogram M-48A2, grafted to the Tamiya M-48A3 turret. Also, I used the Monogram cupola hatch. It fits perfectly; and it is the correct design—a lot less work.

Thanks again... great to see another USAREUR guy. If you ain't Cav... you ain't SHIT!!!

—Hank Johnson

"Our" attractions

About a week before your Issue No. 20 came out, another modeling friend and I returned from an impromptu Battle of the Bulge tour. I've traveled to Europe several times and have visited most of the big armor attractions. On most trips, I've run in to, well, just about every type of difficulty imaginable. Very often, especially during off-season times, European Military Museums keep greatly reduced schedules or close completely! If tour books list them at all, the information can be inaccurate.

The main problems are that most travel agents don't really like to book anything other than package tours and know little about "our" types of attractions. Living in New York, I've been able to use the national tourism boards attached to many of these country's consulates. While this can be helpful, I've found even these offices seldom know much about military museums.

While planning for this trip, the information I received from the Belgium Tourist Agency conflicted on whether the Victory Museum was still open. Having experienced other disappointments, I always confirm our itinerary. While not a big computer buff, I used my PC this time to search for information. That was a very lucky thing, as I managed to contact a Tourist Agency in Luxembourg that was able to supply us with accurate information.

Not only is the Victory Museum closed, with its collection scattered, but the Museum at Bastone was about to close for the winter! My guide books listed the Bastone Museum as open until Nov. 15th. Another museum we wanted to visit was also closed. I recommend anyone trying to visit the area ignore any guide books and;

1. Contact the Belgium National Tourist office in NYC and try to take one of the special "Ardennes" tour's they offer.

780 Third Ave
Suite 1501
New York NY, 10017
Tel. (212) 758-8130
You can book over the computer at:
http:www.ww2tours.com

2. Contact SEGATOS TOURISME
7 rue Kalchesbruck B.P.
251 L-2012 Luxembourg
Tel. (352) 42.22.88-240
Fax. (352) 42.22.88-250
segatos@hermesnet.com

—Steven Andreano

✉

Got a problem with any of this?

Send those comments to: Mail Sack, Military Miniatures in Review or discuss complaints, problems, wisecracks, etc. via the Internet. Find us at the handle: ***mmir35701@aol.com***

Letters are sometimes edited for brevity, grammar, spelling, national security concerns and other stuff.

We sincerely regret that we rarely, if ever, are able to personally enter into correspondence with our readers.

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RJ35239 - Frt. tire/wheel Set for SWS - $6.00

RJ35250 - Maybach engine for SdKfz 10, 11, 250, 252, 253. 16 pieces, very detailed. $12.00.

RJ35251 - Maybach engine for SdKfz. 7, 251 and SWS. 18 pieces for standard and armored versions. $12.00.

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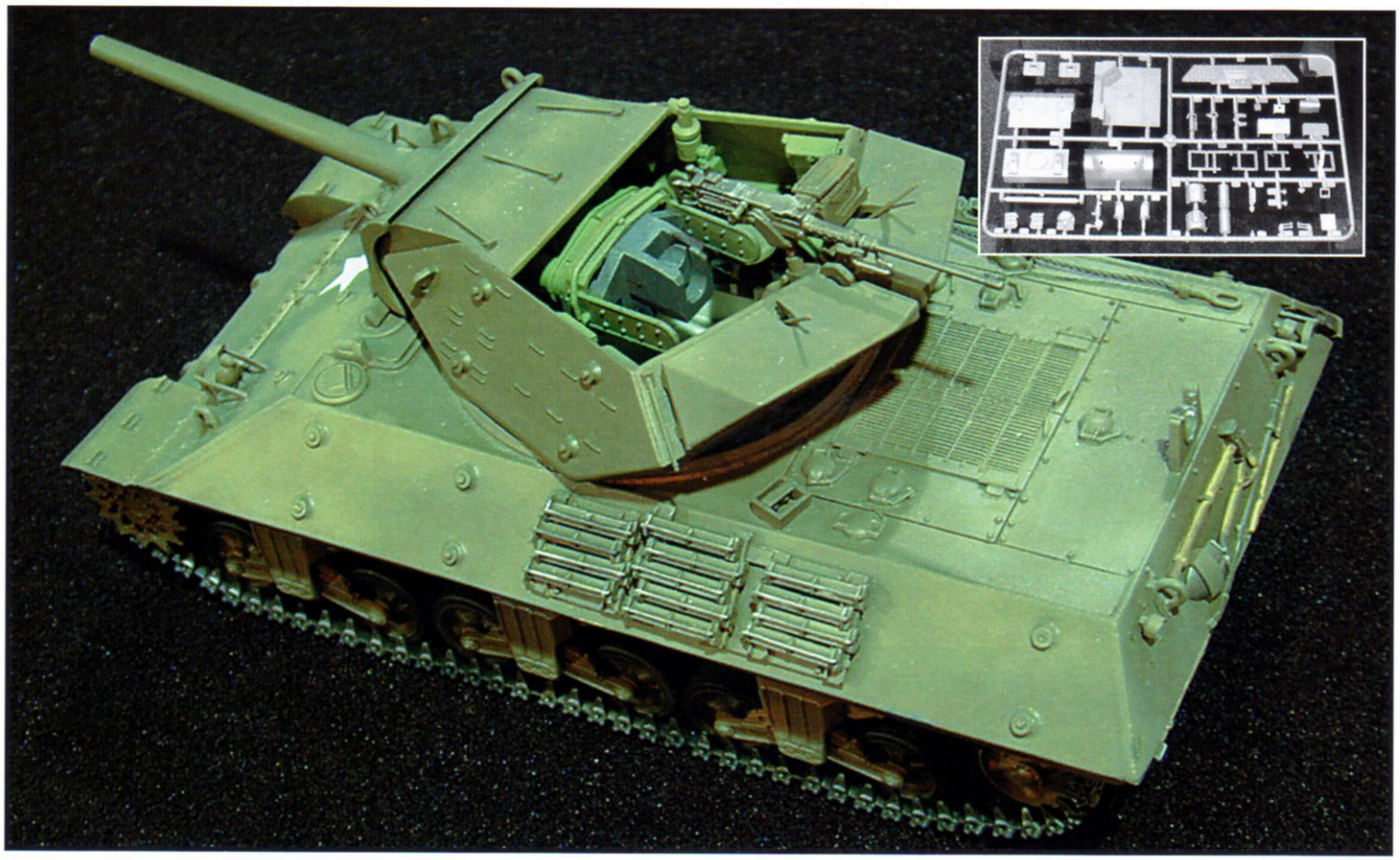
Short Takes

The Year in Preview



The following dope represents materials gathered at both Euro Militaire and the Chicago Model Hobby show, both held this past fall.

Aber

More great photo-etch detail sets from Aber! You can say that again. More great photo-etch detail sets from Aber! Up and coming are: 35063, **PzKpfw I Ausf. B**, for the Italeri-Zvesda kit; 35068, **Panzerjager I**, for the Italeri and Zvesda kits; 35069, **Panzerjager I (early) gun shield**; 35070, **Panzerjager I (late) gun shield**; 35071, **Panzerjager I upper hull**; 35072, **M8 Greyhound**, for the Tamiya kit; 35073, **SdKfz 250/1**, for the Dragon kit; 35079, **Kübelwagen Type 82**, for the Tamiya and Dragon kits, $13.99, and 35080, **Schwimmwagen Type 166**, for the Tamiya kit, $13.99 and 35091, **DKW NZ350, German military motorcycle** for the Tamiya kit.

We can say that a few of the above listed sheets are the most impressive we've seen to date from Aber. Given the extraordinary nature of most of their sheets, this is definitely saying something. Also, look for something a little different from Aber, R-06, narrow weld lines, Price TBA. These are showcased in Tony Greenland's article on the Ostwind several pages to your right.

In Issue 20, we mistakenly listed 35069 as the GMC detail set for the Italeri kit. It should have been 35059. Those responsible have been blown up. Sets 35063 through 35091 are price TBA.

And, now, the photo-etch accessories: 35A66, **Side mesh screens for Pz IVJ, StuG IV (late)**, and Jagdpanzer IV (A); 35A67, **PzKpfw IV J upper mesh screens**, $11.99; 35A72, **M8/M20 fenders and stowage boxes**, and 35A73, **SdKfz 250 fenders**, both price TBA.

As usual, Aber photo-etch is imported by Air Connection and is available through a hobby shop near you or through your favorite mail-order vendor.

Academy/MRC

We wonder why this took so long to happen, but the people who brought you 1/35th scale helicopters have finally announced what we thought was the most obvious choice for a helicopter kit: the Blackhawk. This will be a massive kit, probably coming out to be around two feet in length, depending on how you measure it.

The schedule looks like this: The first kit will be MRCBA110, **UH-1C US Navy Seawolf**. This will be the Vietnam version and will include 4 figures, plus resin MG's, ammo holders & mounts. This should retail for $33.98 when it comes out in April.

MRCBA111 will be **HH-60G Pave Hawk**. This is the modern special-forces bird and it will come with a complete interior, fuel probe and radar dome.

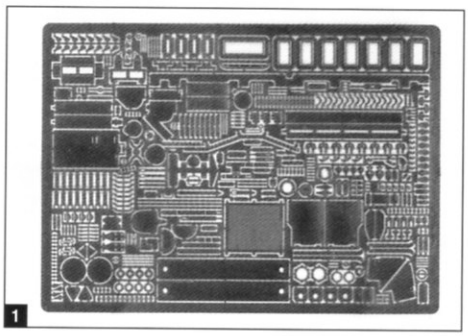
Bringing up the rear is MRCBA112, **UH-60L Blackhawk**. This is your garden-variety troop carrier and it will include the interior and the engine.

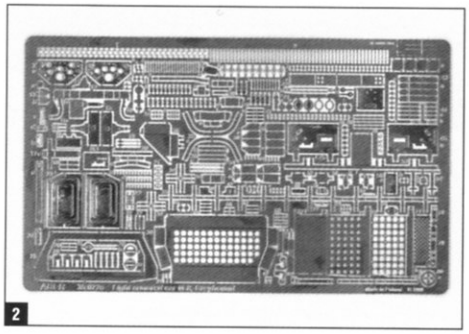
On the last two, look for a $59.98 retail and a release date TBA.

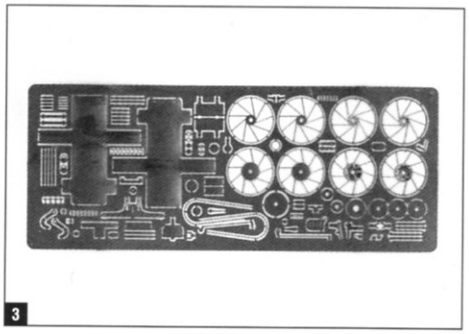
Back on the ground, we also have confirmation on the first of the previously announced Sherman-based kits. The **M-12 155mm Gun Motor Carriage** will be stock number ACY1394 and will retail for $35.00 when it's released in March.

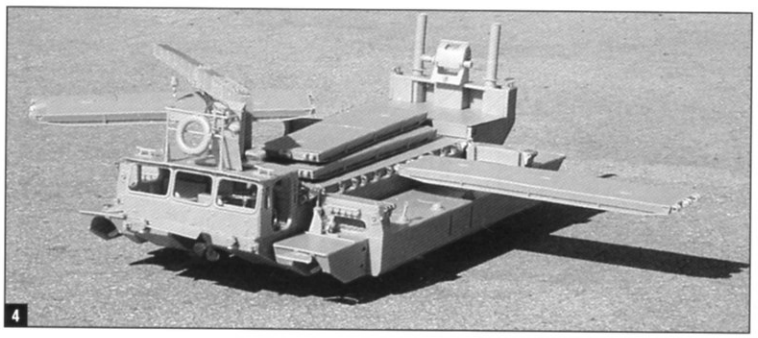
Accurate Armour

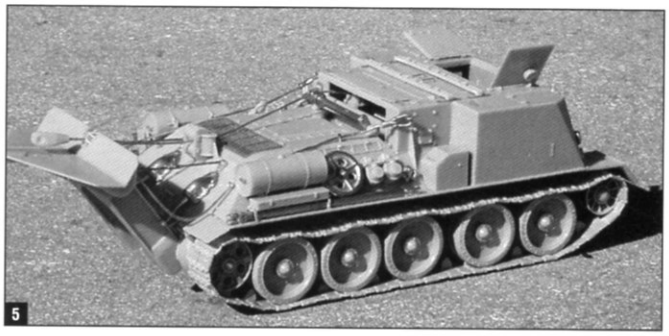
AA had a few interesting goodies on hand at Euro. The biggest surprise was the **M2D Alligator Bridging vehicle**. This was a complete surprise to our staff, as AA had not even given an inkling of its presence prior to the show. Although a built-up kit was on hand, this is still considered to be a future release. As a result, no price is available, but the kit will be item number KT114.



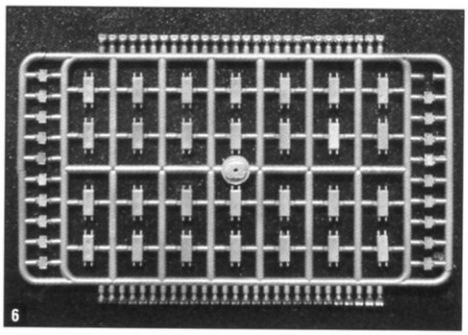








1. Aber's Panzer I B photo-etched set.
2. The elaborate Aber two-piece set for the M8 armored car.
3. Crack out the Optivisor! Aber's delicate set for the Tamiya DKW motorcycle.
4. AA's awe-inspiring M2D Alligator Bridging Vehicle.
5. The equally thrilling VT-34 ARV from AA.
6. A single sprue from AFV Club's T49 track set.
7. One of Conté's "Longest Day" collectors sets.



Available at the show to gleefully run home with (as we did) was K75, the **Centurion ARV Mk II**. This is the 50s-60s version of the beast and its retail is $72.33 export and $84.99 EC. This will also be available in a later **Desert Storm version** with the stock number K76. That kit will retail for $76.59/$84.99.

Another surprise was the lovely little **VT-34 ARV**. This converts the newer DML kit and includes a lot of neat details, like a complete winch drum assembly (visible through the top of the vehicle), a detailed spade and other gear. This one has a stock number of C12 and a retail of $38.30/$45.00. G05 is the **British 7.2" howitzer**. Price TBA

As always, AA products are available direct or (increasingly so) at a hobby shop near you.

AFV Club

Perhaps some of the most significant news from Chicago this year (or last) was the unveiling of the new **M10 tank destroyer**. This thing has been on the list of armor modelers since Elvis was in black and white. Sprues were laid out and a built up kit was on hand as well (see intro pictures). Everything looked really good. The kit includes a very respectable set of vinyl T49 steel cleat tracks. The M10 is stock number 35024 and it should be available now for $35.98.

T51 rubber block tracks will also be available as an accessory set. This is link-to-link (with separate end connectors), like their earlier Stuart track and they will even include spiffy duck-bill end-connectors for $14.98. Look for stock number 35026.

The continuous vinyl bands will also be made available for those of you who hate l-to-l. They are listed as **M4 T49 Track-79/Track** and **M4 T49 Track-79/Track**. These are stock numbers 35027 and 35028, respectively. The "79" and "83" undoubtedly are references to the number of track shoes per run, 79 being the standard number for conventional hulls and 83 being the number for the longer M4A4. 027 is listed as $7.98 and 028 is price TBA.

Continuing the theme, there will also be a set of **VVSS bogies** made available. This will be number 35029 and you'll get a complete set for $14.98. We're dying to see what these look like.

Last but not least, is 3523, **M113 FSV**, now available for $36.98. This is the M113 with the turret of the Saladin armored car plopped on top. This release was preceded by little or no fanfare, but it's welcome just the same.

For up-to-date information of the AFV Club product line, check out the website of their U.S. importer, Marco Polo Imports, at marcopoloimports.com

A-J Press

Hey, get really excited about this: another new presentation from A-J Press, **Panther, Part 3**, this time offers 128 pages, including 80 pages of 1/35 scale drawings, 80 black and white photos and 10 color pages. This volume promises to have an avalanche of new stuff on the Bergepanther and should be highly cool.

A-J Press books are imported by Air Connection and are available through a hobby shop near you or through your favorite mail-order vendor.

Artograph

Had a difficult time finding **replacement parts for your Testors spray booth**? Your search is over. This Minnesota-based company offers the following replacement parts: 200-572, #15 replacement spray hood (it's cardboard, instead of metal), $12.95; 225-316, #15 pre-filter (20-sheet pack), $20.95; 225-317, #15 filter pack (4 each, mid-filters), $44.95; 225-318, #15 ED exhaust adapter, $29.95; 225-355, #15 pre-filter roll tray, $19.95, and 225-356, #15 pre-filter 20 inches by 50 yards, $39.95. Contact Artograph at 2838 Vicksburg Lane N., Plymouth, MN 55447, call 612-552-1112, or fax 612-553-1262. Check out their web site www.artograph.com or e-mail them at sales@artograph.com

Conté Collectibles, Ltd.

Perhaps a bit out of place here, but interesting none-the-less, are Conté Collectibles. These are designed for the collector and the three 54mm hand painted metal WW2 British Paratroopers shown in these pages now are available from this Iowa-based company. Listed as 47099 ($60.00), it joins other three-figure sets, 47098, **British Paratrooper Advancing set** ($60.00) and 47103 ($56.00), **German Wehrmacht Advancing set**. The above sets in the Longest Day Series are planned for release in late 1999 or early 2000. The following additional Longest Day sets and accessories will be available over the next 18 months: 47100, **British Paratrooper Mortar Team**, $60.00; 47101, **British Paratrooper Urban Assault Team**, $60.00; 47102, **British Paratrooper PIAT Team**, $60.00; 47104, **German Wehrmacht Assault set**, $56.00; 47105, **German MG42 Team**, $60.00; 47106, **German Wehrmacht Panzerfaust Team**, $60.00; 47107, **German Panzer Grenadier Assault set**, $56.00; 47108, **German Fallschirmjäger Assault set**, $60.00; 47109, **German Waffen SS Assault set**, $60.00; 47110, **American Ranger Assault set**, $56.00; 47111, **American Ranger Bazooka team**, $52.00; 47112, **American 101st Paratrooper Assault set**, $56.00,

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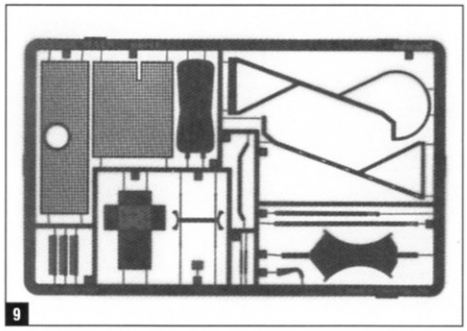

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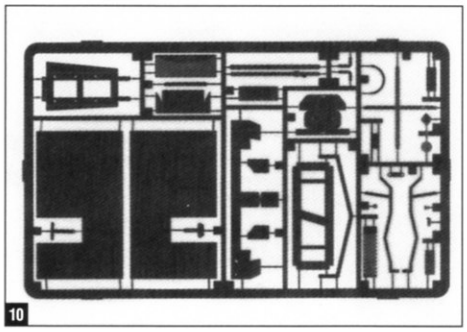

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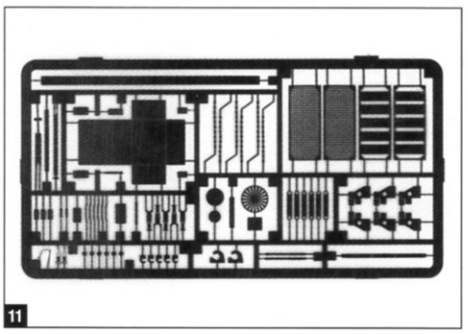
8. Not brand new, but Dragon's 1/9th Kettenkrad was on display for the first time in Chicago. Vinyl figure and styrene I-to-I tracks are featured.
9. Eduard's Maus etched set.
10. The M-46 set from Eduard to dress up the DML kit.
11. Eduard's Befehlswagen Panther set.
12. The Eduard M-1036 HMMV set.
13. Eduard's useful M1A2 etched set.
14. The Borgward IV Ausf. A set from Eduard.
15. Eduard's 2S1 Gvozdik set for the SKIF kit.
16. The new yellow tac markings from Fingerprint Designs.
17. Friul's new KV split link tracks.
18. The new Panzer II D link (early) from Friul.
19. Friul's Panzer II D (late) links.
20. The JS split links from Friul.



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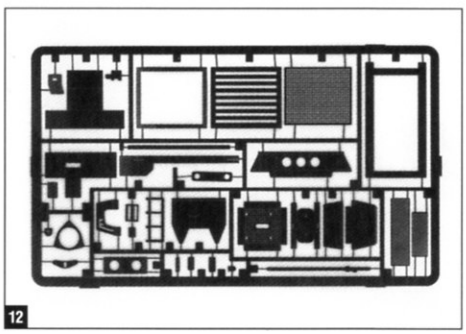

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and 47113, **American 82nd Paratrooper Advancing set**, $56.00. Accessories include, 48000, **Horsa glider section**; 48001, **bunker**; 48002, **trench section**; 48003, **corner cafe**; 48004, **landing craft**; 48005, **hedgerow**; 48006, **Pegasus Bridge section**. Prices for accessories are TBA.

Inquiries should be addressed to Conté Collectibles, Ltd., PMB 404, 1930 Village Center Circle, Suite 3, Las Vegas, NV 89134. Phone number is 877-475-2973; fax is 702-233-8206.

Dragon

Just a few small items from the Dragon this time around. 6124, In the figgy stuff we have **Panzergrenadier Division 'Großdeutschland' (Karachev 1943)**. This will be yet another in the long running series of four-figure sets featuring that cool Volstad artwork (you know they might sell just as well if the boxes were empty!). As usual, priced at $7.98.

6137, is **German Medical Team w/Kübelwagen Ambulance Conversion Kit**. This set replaces the previously announced 9055 release. Rather than requiring the modeler to buy another complete Kübelwagen kit, they have included the necessary conversion parts for the ambulance, along with the medical team figures. Out now for $15.98.

6136, **3cm Flakpanzer IV "Kugelblitz."** This is a revised kit with a lot of new tooling. The chassis is retooled to accommodate the new running gear, which is currently used in Dragon's Jagdpanzer IV L/70. The rear engine cover is also newly tooled and the kit contains a new track tension adjuster. Available now, for $28.98.

For more skinny on Dragon products in the U.S., check out their importer's website at marcopoloimport.com

Eduard

They're unstoppable! More, more, brass for your ass. 35258, **M-1035 HMMV with tow launcher**, nicely detailed brass and some acetate gauges for the Italeri kit; 35259, **M1A2 Abrams**, two great pieces of brass and some acetate gauges for the Dragon kit; 35261, **Borgward IV Ausf. A**, more cool detail on one sheet of brass and some acetate gauges for the Dragon kit; 35262, **2S1 Gvozdik**, two sheets of finely detailed brass for the recent SKIF kit. You know... that last sheet and a set of ModelKasten tracks for the ZSU-23 (they're the same), combined with the SKIF 2S1 G, could make up a pretty nice model.

All prices TBA. Found everywhere you are and in some places you wish you were.

Fingerprint Designs

These guys cropped up recently offering a pretty spiffo line of waterslide decals. Here is the latest we've seen. FPD 35/005W, **U.S. 1st Armored Division North Africa 1942-43**, sheet contains stars from 4 inches to 60 inches, turret stripes, Unit Tactical Signs and platoon numbers in white; FPD 35/005Y, **U.S. 1st Armored Division North Africa 1942-43**, sheet contains stars from 4 inches to 60 inches, turret stripes, Unit Tactical Signs and platoon numbers in yellow. Possibly the first time these stars and markings have been offered in yellow. All prices at TBA.

In the U.S., these are offered by M&Models, 9400 S. Tulley, Oak Lawn, IL 60453. Or they can be obtained directly from Fingerprint Designs, Belmont House, 22 Kent Road, Birkdale, Southport, England PR8 4BJ. E-mail stef@switala.freeserve.co.uk

Friulmodellismo

This well-known Italian company (now working out of Hungary) continues with regular additions to their line of white metal pinned and functional link-to-link tracks. Up now are ATL-51, **KV-1 and KV-2, split link and light links with sprockets** for $30.00; ATL-52, **Marder II, Flammpanzer, Panzer II D/E (early)**, $30.00; ATL-53, **Marder II, Flammpanzer, Panzer II D/E (late)**, $30.00 and ATL-54, JS-1, split link and light links for $30.00.

Handy tip: for those of you who may be working on a scratch building project of the early Panzer IIIs (A-D), ATL-52 is the correct type for those tanks. This could be especially helpful for the Cromwell Models Panzer II D.

Friul goodies are available through Chesapeake Model Designs.

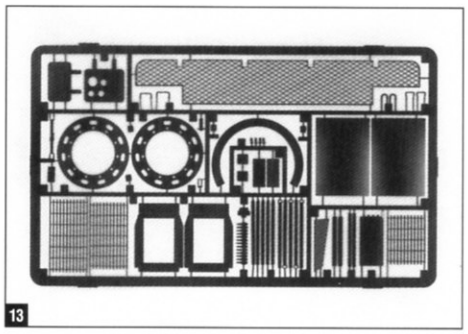
HK Creation Workshop

You modern armor dudes are gonna like this. HK is now offering 3501, **Kampfpanzer Leopard I Track**. This is a set of full-blown injection workable track links for the Kampfpanzer Leopard I family. There are 171 total pieces on 19 sprues to fit the Leopard I and Gepard.

These were originally design for the Elite Modellbau family of Leopard kits (and are sold in Germany by Elite), but they are also suitable for any of the Tamiya or Italeri kits based on the Leopard I.

The niftiest thing about the tracks is that the sprues are configured much the same way the original AFV Club series was. The end connectors are lined up precisely along one side for quick alignment of the blocks.

No U.S. importer or price is listed as of yet, but interested parties can contact HK via e-mail at hkcwchan@netvigator.com



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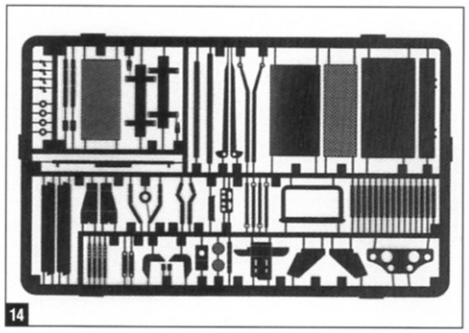

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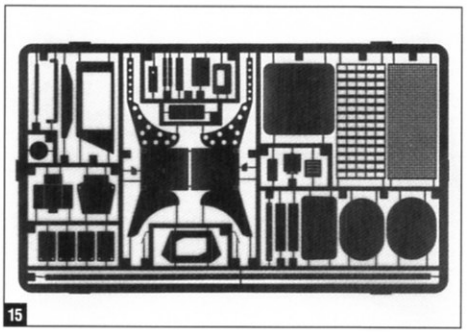

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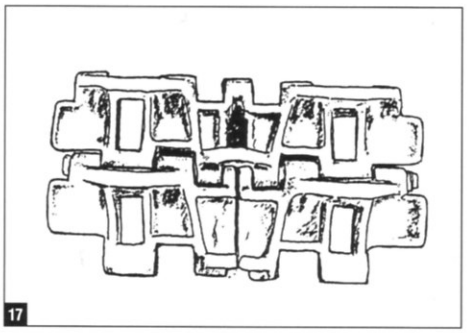

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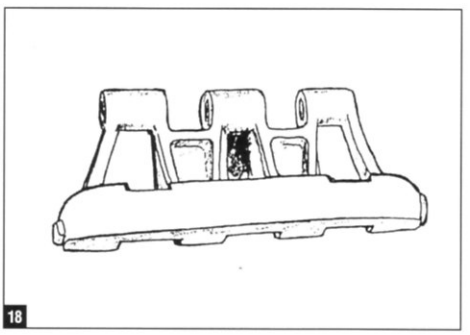

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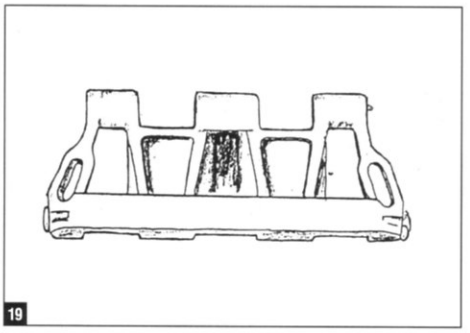

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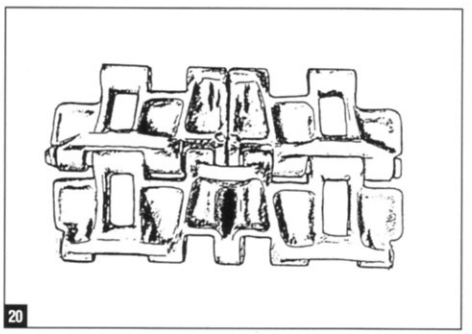

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Italeri

Italeri has some good news and some bad news. First the good news. **Italeri is the first to (finally) announce the release of the LVT model in injection-molded plastic!** This will be LVT-4 and both the stock number and price are still TBA.

The bad news? This long awaited kit is only scheduled for release in December of 2000. Stay tuned to this channel for further developments...

Jaguar

Jaguar was displaying a few of its future, but unannounced, items at Chicago. Hanging out was their **Elefant interior**, their **Elefant conversion/kit** and their **Vietnam Sheridan**.

The Elefant interior was a complete set that included all the turret armor and, what is especially interesting, is that turret was broken down just like the real tank, so it would be possible to show the vehicle busted up or even under construction.

The master on display of the complete (or nearly complete) Elephant kit was a stunner. Even the reps were unsure if it would be released as a full kit or a conversion. What you'd get, though, is really something. Parts were included for the lower hull, turret, gun, all the interior components, driver's station and ammo. Truly a first class effort (see photo).

The Sheridan is the logical follow-up to their earlier ACAV version. The two kits are quite similar and, as such, this represents the later version used in Vietnam with the armor upgrade package.

We'll bring you more precise information on these exciting releases as it becomes available.

For more information on the entire Jaguar line check out their website at jaguarmodels.com

Jordi Rubio

Some more turned aluminum barrels for you German and Soviet armor freaks. JR47, **76.2mm M42**, for SU-76, Zis-3; JR49, **4.7cm Skoda vz38**, for Panzerjäger I, Panzerjäger 35R(f), 4.7cm Pak(t); JR50, **76.2mm FK36(r)**, for Dana, Marder IID and JR51, **76.2mm M27/32**, for T28, T35, BT7A and T26A. And now the accessories to go with them. A02, **German Long Poles**; M01, **German MG13 machine gun**, for PzKpfw IA/IB; M02, **MG-ZB machine gun**, for PzKpfw 35(t), PzKpfw 38(t) and M03, **Soviet DT-29** machine gun.

Available through your favorite hobby shop or mail order outlet. All prices TBA.

Link Model Workshop

Known in the U.S. as Jaguar Link Model Workshop, this Hong Kong-based company has three new offerings: 004, track for the Tamiya **King Tiger (late)**; 005, track for the Tamiya **SdKfz 251**, and 006, track for the Tamiya **Cromwell**.

All the sets are of the non-workable type and all prices are TBA. Available soon, wherever Jaguar products are found.

ModelKasten

MK has finally announced the arrival of the long-awaited Sherman track sets. The first will be SK-44, **Sherman T49 3-bar cleat** and it will be followed by SK-45, **Sherman T54E1 steel chevron**. We've seen photos and the detail on the links looks really good, but there's no word yet on what the set may contain in the way of an adjustable idler.

Both sets will retail for $39.95.

Miniature Alliance

You got a taste of this company's offerings in our last issue. Since then, they've sent us some color photographs of the first three figures from their Dogtag Fighting Men series. The first three figures all are from the Pacific Theater, WW2, and are in 1/16 scale (120mm). All figures are cast mainly in resin, with fragile parts in pewter alloy. MA99-01, **Japanese Army SNCO**, 14 pieces (11 resin, 3 metal), $39.95; MA99-02, **Commonwealth soldier**, 14 pieces (11 resin, 3 metal), available with either hat or helmet, $39.95; MA99-03, **US Marine**, 11 pieces (7 resin, 4 metal), $39.95. The company plans to add to the series and also to expand its offerings to other scales.

Miniature Alliance products are available in the UK through Historex Agents and DreamCatcher and in the US through VLS, The Red Lancer, Yanks Miniatures and Sentinel Miniatures. Check out their website at www.minially.com

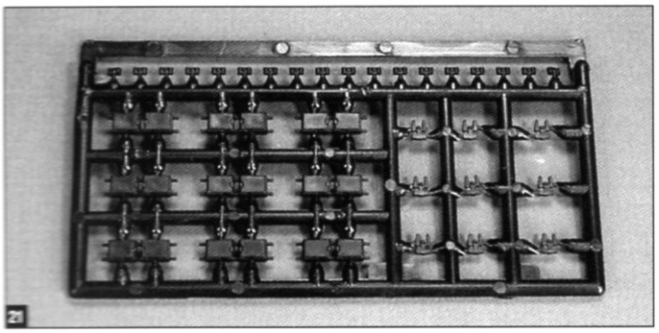
New Connection

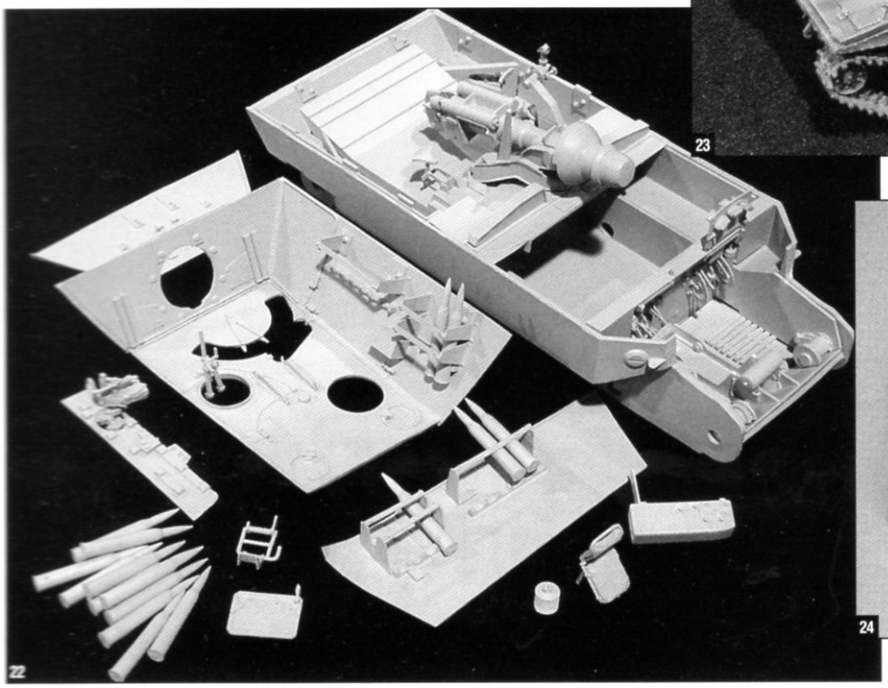
Some of the most exciting items for the armor-oriented dudes at Euro were from these guys.

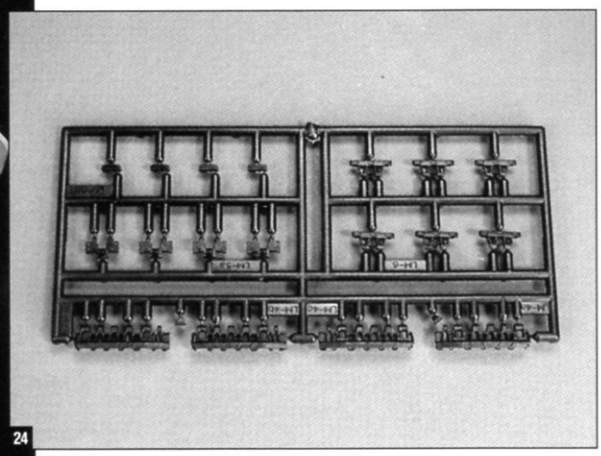
Built up and unpainted models were on display of the following items. The first is NC 3504, **Maultier Vielfachwerfer**. This is the second and rare type of rocket launcher seen on the back of the Panzerwerfer. This is a conversion for the Italeri kit.

Next up is NC 35109, **T34 Ammo Carrier**. This creates a German ammo "schlepper" based on a captured T34 chassis. The kit contains a basic and nicely detailed lower interior for the DML kit and includes a block of ammunition crates to stick inside.

NC 35114, **M8 Drilling** makes up an interesting real life conversion of the U.S. M8 armored car.







Apparently, one German unit mounted the triple barreled drilling MG into the M8. It's designed for the Tamiya kit, but it may also work on the Italeri one with some modifications.

NC 35127, **Krupp Räumer S** is a massive kit of a prototype mine-clearing vehicle. This was in the testing phase at the end of the war. Some of your may recall a photo of this vehicle that shows a GI with his hand on the top of the wheel. Wacky stuff.

NC 35129, **Maultier Field Workshop Crane**. Is a nifty little conversion for the old Italeri standard. This is not sci-fi, as photos show it in action with the StuG. Abt. 210 in 1945.

NC 35143, **Wirbelwind Detail Set** is for the new Tamiya kit and it includes all kinds of parts for the lower turret and hull, plus four nice, new shiny turned aluminum gun barrels

New Connection is also working on NC 35166, **Flakpanzer IV Ostwind Conversion**. This will contain a turret and gun, plus other parts to make an Ostwind out of the Tamiya Wirbelwind kit. Other info is TBA.

All this stuff is really3 new and exact U.S. pricing is still TBA. Release dates should run through mid-2000.

Phebus

Phebus is a small resin manufacturer from France, who has done just a few armor pieces to date. On display at Euro were two very interesting new pieces.

The first is a **modern French 5-ton truck**. This is a very well executed resin kit of the six-wheeled flatbed version.

The other item is a comprehensive **update set for the Heller kit of the AMX-30 MBT**. This includes resin and photo-etch parts.

Stock numbers and accurate pricing were unavailable at press time.

We are hoping that some discreet inquiries will provoke Phebus to pay more attention to us on the other side of the big pond.

Direct those to: 11, rues des Venetes - Lostissement de la Noë 35480 GUIPRY - France.

Precision Models

This Belgian company's line of resin artillery and armor kits are now being carried by VLS. One of their latest items is a 1/20 scale (90mm) kit, 20.005.C, the **VW-Kübelwagen Type 82**. We don't know if VLS will be importing them, but Precision makes a real nice line of 90mm German figures and the Kübel would make a nice basis for a diorama. The price is TBA.

Check your current VLS bulletin for up-to-date dope on this kit.

Resination

Are you into that weird Axis armor? Check this out. We're a little sketchy on who's producing these kits, but if you can't find them under the name Resination, check out Fabulis-Trade '98, Kft. Offered in 1/35 scale are: MV-01, **UT-55 recovery vehicle**; MV-02, **40M Turán heavy tank**; MV-03, **38M Toldi light tank**; MVG-04, **40M Zrinyi assault gun**, and MV-05, **39M Csaba armored car**. Offered in 1/15 scale are MVG-01, **Ansaldo**; MVG-02, **41M Turán heavy tank**; MVG-03, **38M Toldi I light tank**; MV-04, **40M Zrinyi assault gun** and MVG-05, **Ansaldo**. All prices are TBA and there is no U.S. import agent, as of yet.

For more information, contact Fabulis Trade '98, Kft., 1033 Budapest, Hungary, Bécsi út 109. Phone/fax is 00 (36) 1 388 6250.

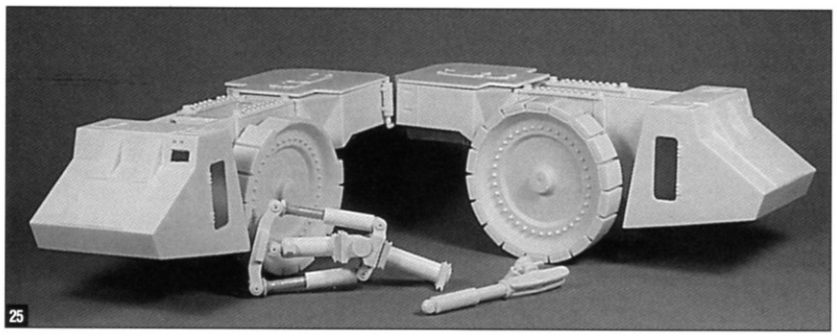
Royal Models

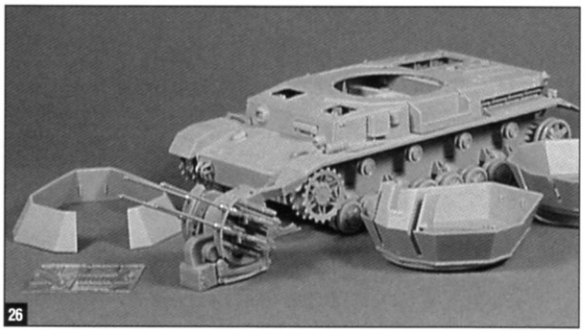
Royal is getting to be as prolific as that "other" European resin company. This is their list as of the end of '99. 201, **Steyr 1500/A01**, resin and photo-etch set for the Tamiya kit, $29.95; 202, **U.S. Army equipment** is all kinds of good stuff like bandoleers, bags, canteen, slings, etc., plus a sheet of photo-etch brass, to boot (this is real, real cool), $26.95; 203, **German equipment**, see 202 and think "even more good stuff and a sheet of photo-etch," $26.95; 204, **M4075/18 Italian tank**, resin and photo-etch detail set for the old Italeri kit (we're guessing it might also be suitable for the old Tamiya kit, as well), $20.95; 205, **Kitchen utensils** is knives, bottles, cups, plates in resin with serving trays and utensils in photo-etch, but someone forgot to clean the dishes, $7.95; 206, **German tank equipment**, is more great resin stuff for your next perfect panzer, $17.95; 208, **German jerrycans**, a passel (or is it a flock?) of jerrycans, plus some cool little photo-etch caps, $9.95; 210 is **Waffen SS "Stoumont,"** German figure carrying a Panzerfaust over his shoulder, modeled after a famous scene from the Battle of the Bulge, $11.95 and 212, **U.S. tank equipment** is crates, cans, helmets, netting, and lots more for $17.95.

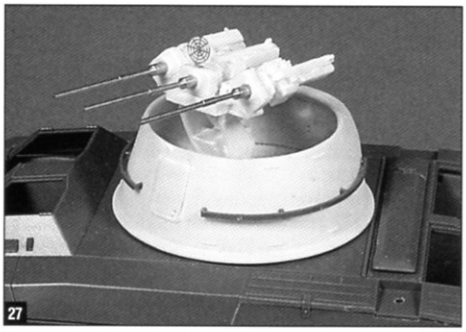
Royal Model Accessories are available in the U.S. through Chesapeake Model Designs. See their advertisement in this issue.

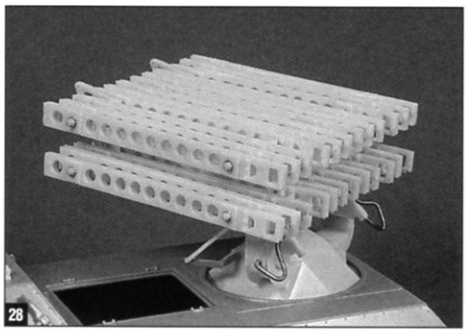
Scale Line

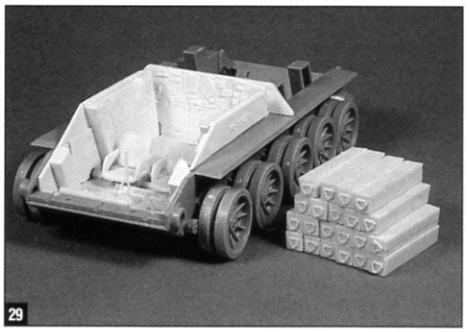
More up from this somewhat enigmatic Dutch resin company. Announced are 120-016, **1/15 scale German antitank gun Pak 40**, includes ammo box, ammo and shell cases; 135-019, **truckload of German jerrycans and oil drums**; 135-020, **Phanomen Granit 2500H German ambulance** and 135-022, **village water**



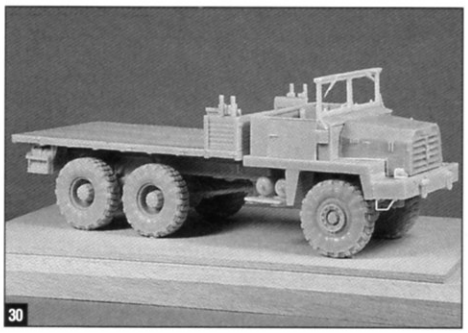


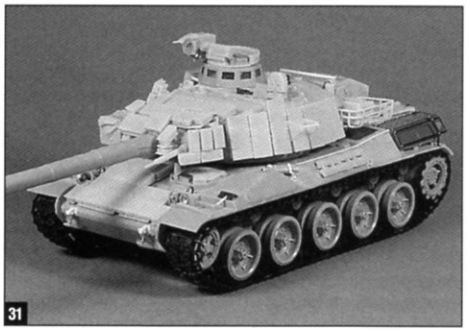






21. The new Leopard I link-to-link tracks from HK Creation.
22. Jaguar's complete Elefant upper and lower hull.
23. The Vietnam Sheridan from Jaguar.
24. Link Model Workshop's new tracks. This is a sample sprue with multiple types on a single sprue.
25. New Connection's gigantic Mine Raumer. Almost too big to fit on this page!
26. The new Wirbelwind detail set from New Connection.
27. New Connection's wacky M8 Drilling conversion kit.
28. The rather unique Maultier Vielfachwerfer from New Connection.
29. New Connection's T34 ammo carrier conversion.
30. The new modern French 5-ton truck from Phebus.
31. Phebus' AMX-30 detail set.





pump. All prices TBA.

For more information or a complete product list, contact Scale Line, Zonnebloemstraat 12, 4001DZ Tiel, the Netherlands. No known U.S. importer, as yet, but they do accept Visa and sell kits by mail order.

Scale Model Accessories, Ltd.

These guys continue their line of rub-down stencils with SMAP056, **WW2 U.S. Army auxiliary vehicle markings**. This time, the sheet is a combination of dry transfers and dry transfer stencils and it contains a scale ton of teeny white markings. The mixture of stencils is about a third and we were quite impressed with the type of markings offered and they even include a mix of personal vehicle names and graffiti. Neato.

Interested parties can (and should) contact Scale Model Accessories, Ltd., 160 Green Street, Middlesex, EN3 7LB, UK.

Skybow

We have it on good authority that the next all new Skybow releases will be as follows: **WC51/52 Weapons Carrier, WC62/63 1.5-ton 6x6** and the **WC53 Carryall**.

If you're wondering about those slashes, the two numbers denote a vehicle with and without a winch, just like the command car (57 with winch, 56 without it). Like the command car, the others will all offer you the option.

In case you're not familiar with Dodges (or if you forgot, like we did), the vehicles all share a similar chassis. The notable exception is the 6x6, which is lengthened. The WC51/52 Weapons Carrier is your basic cargo version with an open bed. The WC53 Carryall is sort of a station wagon version and the 6x6 is the larger primer mover variant, designed to tow the 57mm gun.

We are currently building two of the command cars for issue 22 and they are truly great kits. The follow-up kits should be well worth the wait.

We also have word on what will be Skybow's ultimate WW2 U.S. soft-skin. We can't say exactly what it is yet, but this thing will blow the lid off the joint when it's released!

Squadron Signal Publications

In March, Squadron will re-issue the first in its series of Combat Troops In-Action books, 3001 **Fallschirmjäger In Action**, ISBN 0-89747-051-6. This book is a bit of hobby history as it contains the very first set of Ron Volstad illustrations done for a military book. Expected in February is a new publication, 5701 **M4 Sherman Walk Around**. The first in a new series by Jim Mesko, it provides an in-depth look at the M4 Sherman tank in US service during WWII and Korea. Includes detailed photos of the chassis, running gear, engines, turrets and armament. Contains numerous black and white line drawings, 10 color profiles, 40 pages of color and 80 total pages. In May, look for 6081, **Panzer IV** by Kevin Hjermstad. This book examines the developmental detail of the PzKpfw IV gun tanks from 1939 to 1945, using photographs and drawings. Contains numerous black and white line drawings, 8 pages of color profiles, and 64 total pages. Prices TBA. For more information, contact Squadron Signal Publications at 972-242-1485.

Tamiya

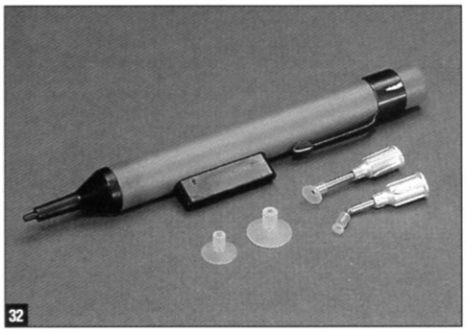
There's a few things cookin' in the Tamiya kettle in the "post-FAMO era." Your editor, after uttering several unintelligible statements and some very minor drooling, managed to actually have a conversation with Mr. Tamiya himself at Chicago this year and asked the following question: will the year 2000 be as active a year for armor as 1999 was? The answer was "definitely yes, but perhaps not all the kits will be in 1/35th scale." Hmmm... Unfortunately, Mr. Tamiya did not elaborate, but it certainly gives rise to some interesting speculation, now doesn't it? We wonder if their wonderful little 1/16th scale figures might some day get some company. More news as it develops.

What we do know is that Tamiya will weigh in with, of all things, a **Leopard 2 A5 MBT**. This is quite a surprise, but perhaps it was the release of the Type 90 that inspired them. This will be an all-new kit and it will depict the version with the additional armor on the turret. Yea, baby! Look for stock number 35242. This will be a May release and the price is still TBA.

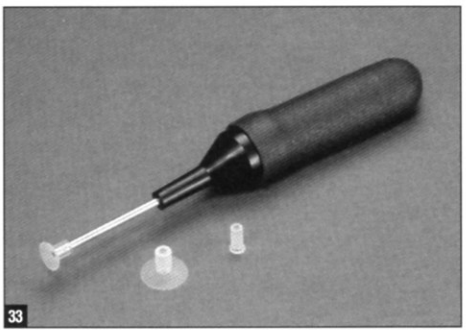
Backing up a bit sequentially is, 35240, **German Soldiers with Bicycle**. Some of you may recall the older, single-sprue bagged set with the '89' stock number. Well, this time it includes two of the original sprues, along with two new figures and a load of accessories. This is a June release with a retail TBA.

35241, **German Motorcycle Orderly Set**, is another old-new mix. This time, it's the DKW motorcycle sprue along with two new figures (a rider and an MP), some barricades and printed sign posts. This is another retail TBA item, when it comes out in May.

In other news, Tamiya has some handy-dandy little tools to make building your models easier. 74041, **Electric Handy Drill**, $23.50, 74042, **Electric Handy Router**, $23.50; 74043, **Electric Handy Router bit set**, 5 pieces, $16.00; and 74044, **Fine Drill set**, for the Tamiya Pin Vise, set includes 3mm, 4mm, 5mm, 6mm



32. The larger Hobby Pal suction tipped grabber tool.
33. It's smaller and cheaper brother, The Model Pal.



and 8mm HSS drill bits, $13.00. Both the drill and the router are battery powered and would be useful additions to any work-bench.

Techstar

Techstar is the line of photo-etched diorama accessories offered through VLS. The stuff is pretty ambitious and elaborate. Look for the following: 1013, **Mansion gate**, an intricately detailed gate with fence sections for both sides, 4 inches high and 7 inches wide. It can be used with 1014 or set inside a stone wall for $9.95; 1014, **Mansion fence**, 6 inches wide and continues the pattern of 1013, $9.95; 1015, **Sidewalk Cafe Furniture**, two wrought-iron tables, nine chairs with intricate detailing, $9.95; 1016, **Exterior Clocks**, six large, ornate clock faces with mounts for attaching to buildings, hanging over sidewalks, etc.; 1017, **Jungle Tree Leaves**, 21 banana tree-style leaves in assorted sizes, $9.95; 1018, **Fan Palm Fronds**, 24 palm leaves in assorted sizes; 1019, **Date Palm Fronds**, 24 palm leaves in assorted sizes, $9.95; 1020, **Barbed Wire**, 40 six inch strands of wire, $9.95 and 1021, **1.5mm light diagonal mesh**, a 3.5 inch by 6 inch sheet for many different projects, $9.95.

More ordering information on the Techstar line, see the VLS ad a few pages to your left.

The Tank Workshop

These guys are always coming up with useful and inexpensive little accessories for the armor minded. Check this out: TW2054, **King Tiger muzzle brake with canvas cover**, $3.75; TW2055, **Porsche Elefant muzzle brake with canvas cover**, $3.75 and TW2056, **Jagdpanther muzzle brake with canvas cover**, $3.75.

The Russians are coming! Look for **KV I 41-43 Engine Deck**, $5.00; **Early KV I-II engine deck**, $5.00; **KV8 Flame Tank (turret & accessories for Tamiya KVIB)**, $13.00; **KV II 152mm Barrel**, $3.00 and **KV I 1942 up-armored turret**, $15.00.

The **M125** is coming down the pike soon, too. This is the follow-up to the awesome M123 and it's the big cargo version of the 10-ton truck. It was also used to tow big artillery pieces.

Look for about **10 new figures**, predominantly German, but some Russians and U.S. GIs, too, to be coming from Tank Workshop in the near future.

All TWS conversions are for Tamiya kits, unless noted. All turrets are hollow and wheel sets are complete sets.

TWS products are available through VLS and a hobby shop near you.

Virtual Industries

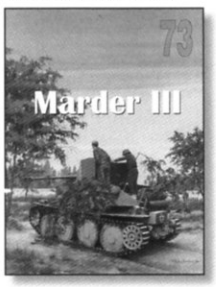
Here are a couple of those items that will make you ask yourself "Why didn't I think of that?" **The Model Pal** ($7.95) and the **Hobby Pal** ($19.95) use suction to allow you to pick up large and small pieces and rotate them, add paint or glue and then precisely place them without worrying about dropping them.

It sure beats those clumsy tweezers that can sometimes be hard to hold and get in the way. Model Pal includes 1/8, 1/4, and 3/8 inch suction cups, while the Hobby Pal offers suction cups in four sizes. Check out these neat little gizmos at your local hobby shop. And guess what, they're made in the USA.

Book Reviews

Marder III

by Dla Michalka
Wydawnictwo Militaria
58 pages of B&W, with color plates
ISBN: 83 7219 026 7



This is number 73 in this extraordinarily long running series on second world war armor.

The basic formula is a simple and well-tested one. Chuck a whole slew of wartime photos together with beaucoup color plates and mix in a few line drawings (shake) and you've got a tasty reference cocktail. This time around, it's a look at the German SPG based on the chassis of the Panzer 38(t).

They've covered every variant here and the special thing about this volume, is, well... volume. A huge amount of territory is covered in this little book. The bulky early models with the Russian 7.62cm gun are documented right through all the various 7.5cm gun versions.

There are no fewer than twenty-five snappy looking color plates and these also reflect the range of vehicle types. BUT WAIT... we'll throw in sixteen crisp line drawings! Now how much would you pay?! (Sorry)

And if all that isn't enough, the photos are spectacular. There's an excellent selection of wartime stuff in the field, but the highlight for us was a rare and unusual sequence of factory photos showing the interior of a Marder III with the rear mounted 7.5cm gun. These are unusual in that they very deliberately show the kind of detail that one would expect a modeler with a camera to focus on. And these shots are nearly sixty years old!

The only real drawback, and this applies to the entire series, is that the book's text is entirely in Polish. Of course, the saving grace is that all the captions are also described in English.

"Honey, I only buy that for the photos."

Prinz Eugen, Balkans Archive

by Fraser Gray and Bruce Crosby
Fraser Gray, 1999
43 pages, B&W
ISBN 0-9532013-3-3

One of the most remarkable things that has occurred in our little end of the hobby in recent years, is the great number of previously unpublished photographs that have come to light. This book is based on one such set of photos.

The Prinz Eugen (pronounced Oy-gen) division was a group of SS bad boys composed primarily of ethic Germans from Romania, Albania and Bulgaria. They had a well-deserved reputation for evil developed in their long fight against Yugoslavian partisans. It sometimes seems like the more things change, the more they stay the same, doesn't it?

The division was equipped almost entirely with captured equipment, particularly within its armored units. This is the primary focus of this brief book and it is neatly broken down into short chapters, each of which documents a fascinating variety of French, Italian and German vehicles.

The photographic and printing quality are excellent and the highlights include the H38, the R35, the Char B2, the ADGZ armored car, the C35 and the Flak 38.

The French vehicles are of particular interest as good, clear close-up shots are scarce. These photos are helpful to the French armor enthusiast, but especially to those interested in the unique modifications applied by the Germans.

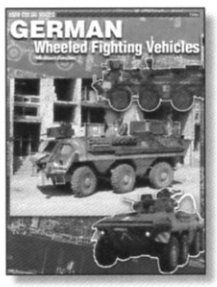
We can't recall ever seeing decent photos of the rare Austrian ADGZ armored car, and there are four here.

The sections on the Flak 38 are also quite handy, with several good close-ups of both the single and four-barreled versions.

A great little value-priced package.

German Wheeled Fighting Vehicles

by Michael Jerchel
Concord Publications
48 pages, color
ISBN 962-361-657-0



Modern German armor hasn't always been the popular subject that WW2 German armor has, but with the introduction of the recent Revell kits (and the pending Tamiya Leopard 2), that interest is starting to grow.

This Concord title approaches the subject in a very thorough manner, starting with the fully armored versions of the Mercedes 250 utility vehicles. These were retrofit with armor for their role in the SFOR operations. Several other normally "soft" vehicles are shown equipped with what might be termed as "evacuation" packages. One excellent example is the Elefant tank transporter, which has also been retrofit with extra protection.

But the meat of this book is its coverage of the six-wheeled Fuchs and eight wheeled Luchs armored cars.

The coverage of the Fuchs is quite extensive, starting on page 11 and running through dozens and dozens of color photos, which depict a bewildering number of variants of this much-used vehicle. Nearly every photo is of the vehicle in the field during the SFOR mission. There are a few of the vehicle painted in white, which is indicative of a UN mission. There is even a photo of a vehicle used by the British during Desert Storm. All of these photos will be useful for modelers as they contain close-up shots of the engine and on-board equipment. The many variants and paint schemes shown are certain to inspire conversions and detailing of the Revell kit.

A bonus is a smashing set of 1/35th scale plans of the up-armored Fuchs with the Milan missile launcher. These are presented as a full-size fold-out.

The coverage of the Luchs is not as extensive as that of the Fuchs, but the photos are of the same high quality. Again, these are primarily of the vehicle deployed with SFOR.

As always, the Concord titles are supplemented with color plates and there are four in this book, including one each of the Fuchs and Luchs.

Don't reach for that Revell kit without this book in hand!

Flak & Fiction

Look out! It's the proposed twin barreled monster conversion from CMD

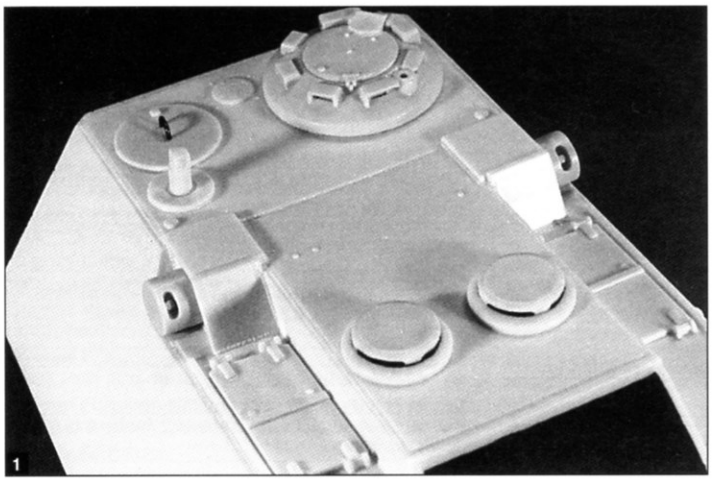
Photographs: Joe Morgan

Another in the continuing line of proposed German vehicles (or "Nazi science fiction," as some modelers describe it) is this 88mm Flakzwillig, designed to be fitted to the biggies, the E-100 or Maus. Chesapeake's instruction sheet tells us that Russian troops found engineering drawings and a wooden mockup of this beast; the rest is modeling history, fueled by the insatiable desire for anything German. Soon to come, I'm sure, is the "undescribed tracked search radar vehicle" and the "undescribed command and control vehicle," just as soon as somebody finds a doodle on the margin of a note pad that could be these things. But I'm not going to get into a rant about all the stuff that was real and has never been offered, in resin or styrene.

Construction

I used an E-100 for this project, because that vehicle was never fitted with a turret, (and I like the looks of the "E" with its sloped armor, versus the slab sided Maus). Therefore, there's no pictures of an E-100 with a turret/color scheme to conflict.

The DML kit built very nicely with no problems. The raised area around the turret ring on the upper hull must be removed to accommodate the CMD turret. The only additions I made to the kit were a section of track on the lower nose plate and an anten-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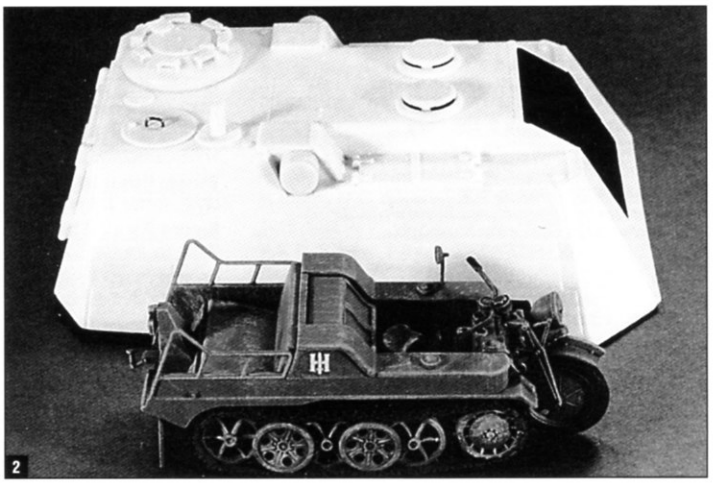
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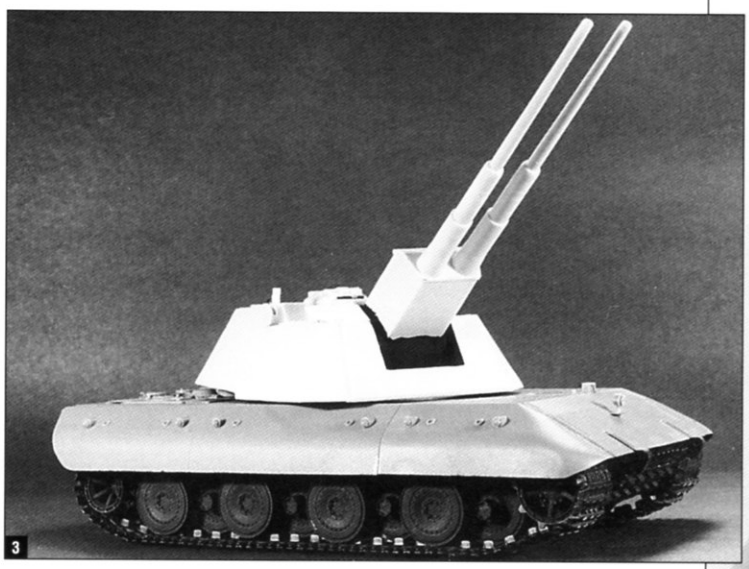
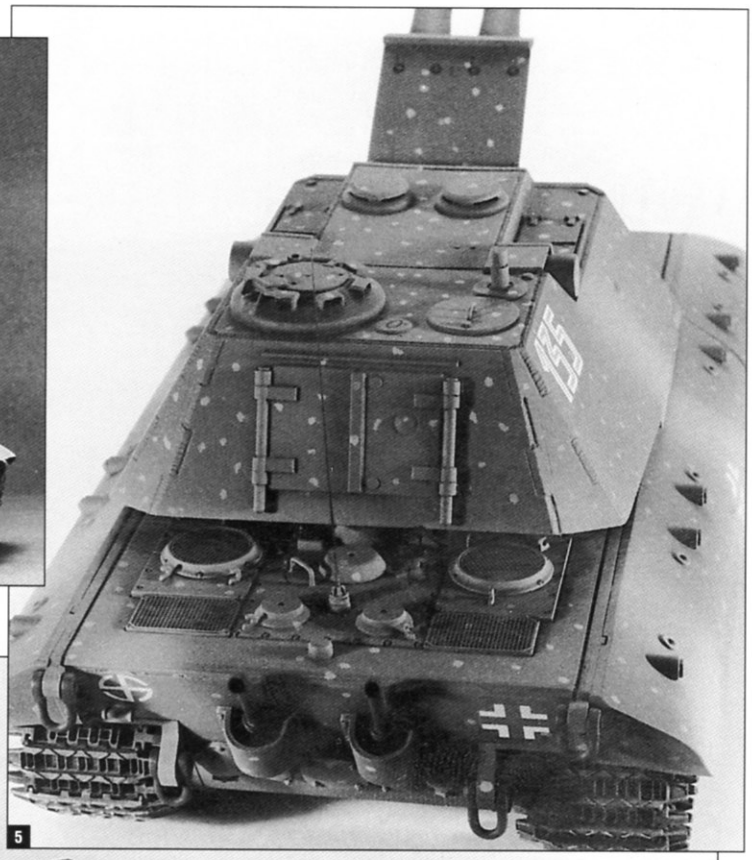
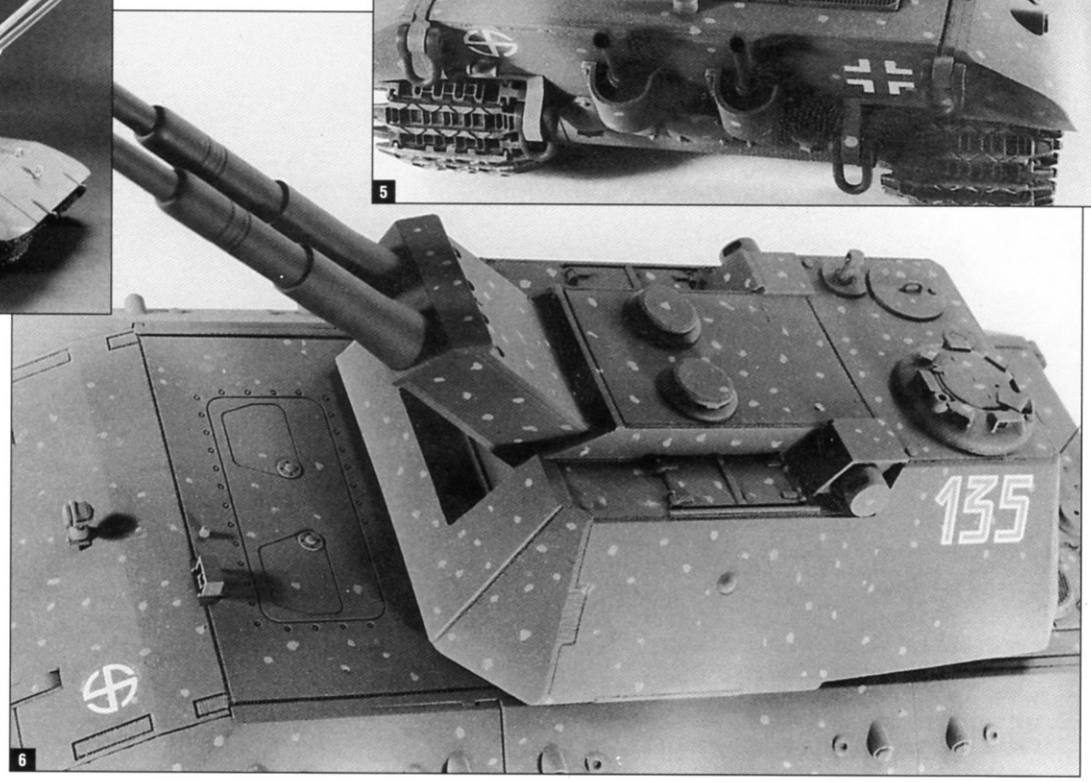






1. Very nice casting detail on the turret top, but only what we've come to expect from Bill Miley. Note that the range finders (the little round doohickey on each side of the turret) must be matched to the angle of the guns. 2. How big is the turret? Here it is with a Kettenkrad in the foreground to provide some perspective. 3, 4. Here's the unpainted beast, again with the 'krad. 5. The rear of the turret is also impeccably detailed, with the rear doors being very nicely cast. DML's mesh screens for the engine deck add to the visual appeal. 6. I used markings for SS "Wiking," 'cause this is fiction so I could. The ambush scheme on the turret, with the Tamiya decals, shows well here. It's a good thing this thing was never built , the business end of those two 88s was not a view to be relished by Allied pilots!

na mount. The tracks were attached by a piece of Plastruct strip and a couple of big bolt heads from my spares. The antenna mount came from DML's German Tank Antenna set (#3819); the antenna is stretched sprue.

The CMD turret is in light resin, and is to the standards we've come to expect from this manufacturer. A little sanding has to be done to the turret base and the gigantic mantlet to get them to fit. Everything else just drops in. Included is a very nice set of periscopes for the commander's cupola; this is, however, all the interior detail for the cavernous turret. The truly afflicted could buy a couple of Tamiya 88s and use the breeches to dummy up an interior, but then you'd have to open the fixed back doors to show 'em (and these guns were to be KwK 43s, anyhow).

Paint and Markings

As suggested in the instructions, I used a base coat of dark green for the monster. Camouflage of Africa yellow and hull red (Pactra colors) were airbrushed on. I decided to do the "ambush" scheme of yellow splotches over the green and red portions; I've always liked this camo and, since this is fiction, why not? The markings came from my spares and were applied over clear gloss, then coated with flat. Finally the vehicle was given a light over spray of yellow to blend everything.

Conclusion

The result is spectacular, a hulking brute with two prominent gun barrels. The molding is absolutely state of the art, as good as anything done in the world. It's just great, and the German freaks are drooling as they read this and burning up the phone and fax lines to Bill Miley. Now, how about a Rumanian R-2 turret to fit the CMK 35(t)? I know they actually made these, but I'd sure like to have one.

—Joe Morgan

MMiR RECCE

Chesapeake Model Designs Proposed 8.8cm flakzwillig turret conversion. Kit number CMD-26. Kit graciously provided by the manufacturer. Suggested retail $40.00.

References

Only the plans... maybe something buried deep in Tom Jentz's closet?

Germany's Merkava

ANOTHER LATE WAR PROPOSAL, THIS TIME FROM CROMWELL MODELS

Photographs: Fraser Gray

"It looks like a Merkava." This will probably be the exclamation you will most often hear when you exhibit Cromwell's VK 4502. Of course, if you have an interest in German World War two prototype tanks, you will recognize the racy lines of professor Ferdinand Porsche's proposal to meet the German Army's requirement for a new heavy battle tank.

Unfortunately for the Professor, dissatisfaction with his design practices had resulted in a growing criticism of his work. Despite Porsche's well placed government connections, concerns were voiced over his apparent disregard of the material privations of a country deep at war. Porsche's reliance on exotic and unproved power trains, such as the VK 4502's petrol electric drive, all contributed to the decision to award the lucrative contract to Henschel, who then developed the famous King Tiger II. To add to the Professor's problems, work had already begun on the manufacture of the ill-fated VK 4502 turrets. When the cancellation was announced, it was decided to transfer fifty of the completed turrets from the Krupp factory to the nearby Henschel works for conversion and installation on the Henschel chassis. It is doubtful that the rear turreted version of the VK 4502 reached prototype stage, although strong evidence suggests that prototypes of the forward mounted turret version were produced before the cancellation order was received.

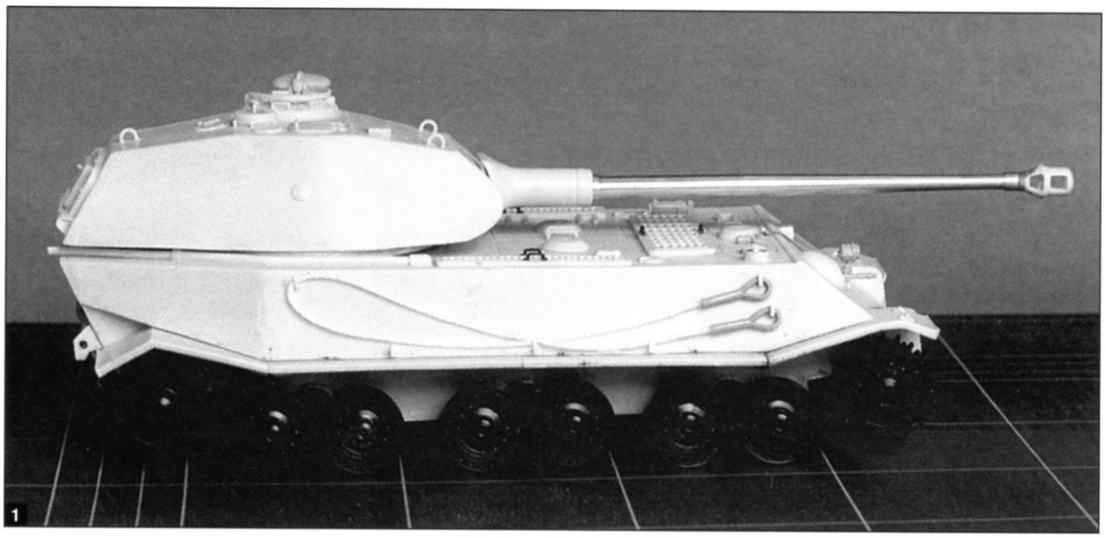
The model: it's a kit— no it's a conversion...

Is the contents of Cromwell's black box a kit or a conversion? It is difficult to say. To complete the model it is necessary to purchase either Italeri's Elefant or Tiger (P) kit to furnish the resin hull with running gear, which hardly counts as conversion work! Swift calculations will reveal an overall competitive price for the package and will soften the blow of an apparent waste of a kit. I am sure the ever hungry scrap box will be grateful for the surplus parts!

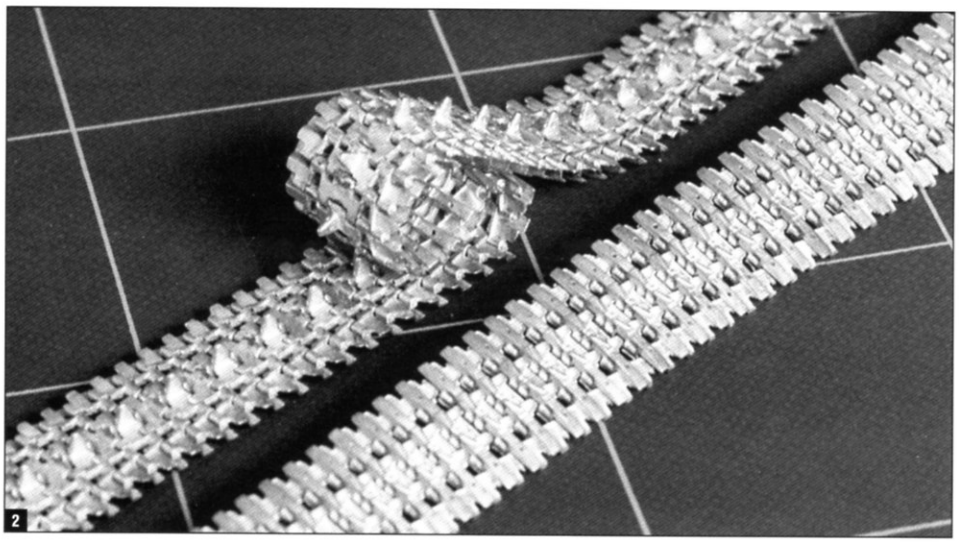
The VK 4502's components are cast to the usual high standards of Cromwell Models, with most of the detail molded in position. It is good to see the inclusion of a Jordi Rubio gun barrel. The successful casting of long gun tubes seems to be a problem area for resin kit manufacturers. I was grateful to avoid the chore of trying to straighten out the often troublesome part in hot water, and the accompanying burnt fingers! Playing to the resin medium's strengths, inspection of the track guards will reveal the non-slip pattern molded around the radius of the bends, duplicating the stamped metal track guards of the Panzer's predecessors the Elefant and Tiger (P). This is a technically difficult feature for the injection molding process to reproduce and is a noticeable absence from the Italeri kits.

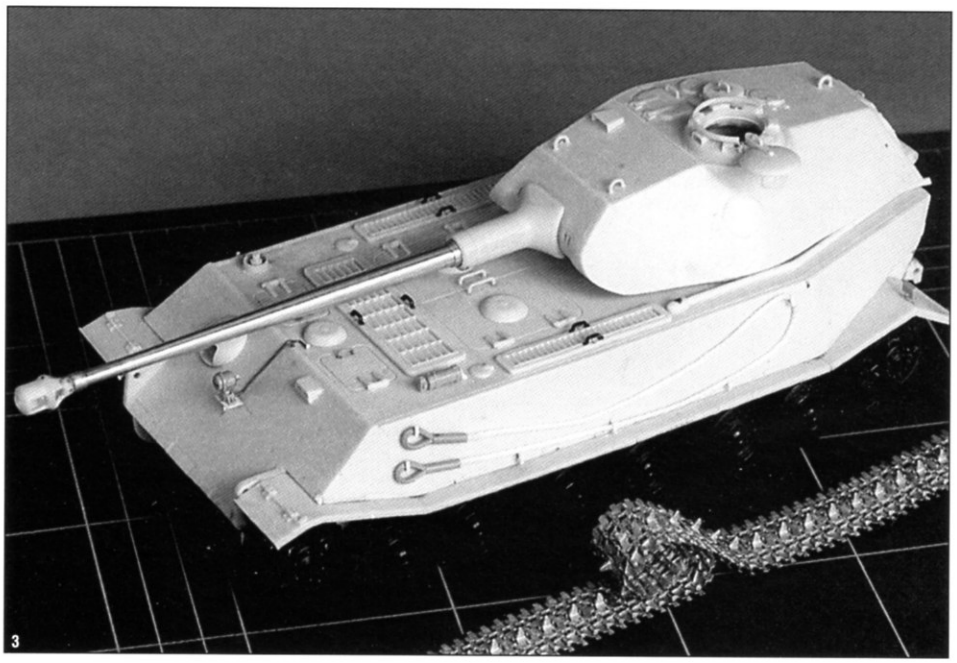
To begin construction, I removed and assembled all the necessary running gear components from the Italeri Elefant kit and assembled the suspension components, as per instructions. The suspension units were then dry fitted to the resin model's hull. I then turned my attention to the track guards. Care should be exercised with these components. I tacked into position the front and rear track guards with a small amount of super glue applied with a tooth pick. When I was satisfied with the fit and alignment, I permanently secured the guards by flooding the joints with super glue, taking care not to damage the non slip pattern. I then dry fitted the connecting middle sections of the track guards, which required a minimal amount of trimming to achieve a snug fit.

I was quite amazed at how quickly I was assembling the kit, and I soon had all the turret and hull assemblies complete.



1. The Cromwell kit is a conversion, although only the running gear from the Italeri kit is necessary to complete the model. New tow hawsers were made from nylon cord. The position of the tools and stowage was taken from a drawing in the Spielberger book. 2. The kit requires longer tracks than those found in the Italeri kit. Rather than lengthen those, I opted for a new set from Friulmodellismo. Friul supplied plenty of extras. More than enough, in fact, to make the runs and still have a few links leftover for the spare track holders. 3. The completed kit prior to painting. Cromwell provided one of the excellent Jordi Rubio gun barrels in the box. This was a refreshing change from resin, which can sometimes be warped and difficult to repair.





Prototypical embellishment

At this point I decided to embellish the model with items from Tamiya's Panzer IV tool set. I added a convoy light to the rear fender and a fire extinguisher to the engine deck. I also replaced the electrical cable of the Bosch headlight with fine copper wire. The slab sides of the Panzer looked somewhat bare, so I decided to add some tools and a set of towing hawsers. The initial impulse is to duplicate the fixtures of Henschel's King Tiger II. After consideration, I decided it was unlikely Porsche wished to be influenced by a competitor. For inspiration, I consulted W.J. Spielberger's Tiger and King Tiger tanks and I decided to copy the tool and hawser positions from the drawings of the VK 4501 Tiger (P). The heavy lugs supporting the towing hawsers were made from strips of thick plastic card. When the strips were cut, they were secured to a length of brass rod with fuse wire, the rod acting as a pattern for the lug's hook. When I had attached ten strips, the rod was then dipped in hot water and then quenched in cold water to set the plastic. The waste can then be trimmed and the hawser hooks super glued to the hull sides. Milliput putty was then applied around each hook and textured with the point of a scalpel to suggest weld seams. Further hawser clasps were modeled from small plastic strip. The Hawser cable was made from a length of nylon cord. I prefer using cord to wire, as I feel it has a natural scale sag when installed. When I was satisfied with the cord's position, I painted it with a mixture of water and white glue. When the glue has set, the hawser can be removed and accurately repositioned after painting has been completed on the model, producing a neat finish.

Italeri's tracks will require lengthening with the kits spare links, as the VK 4502 has a longer hull than the Elefant.

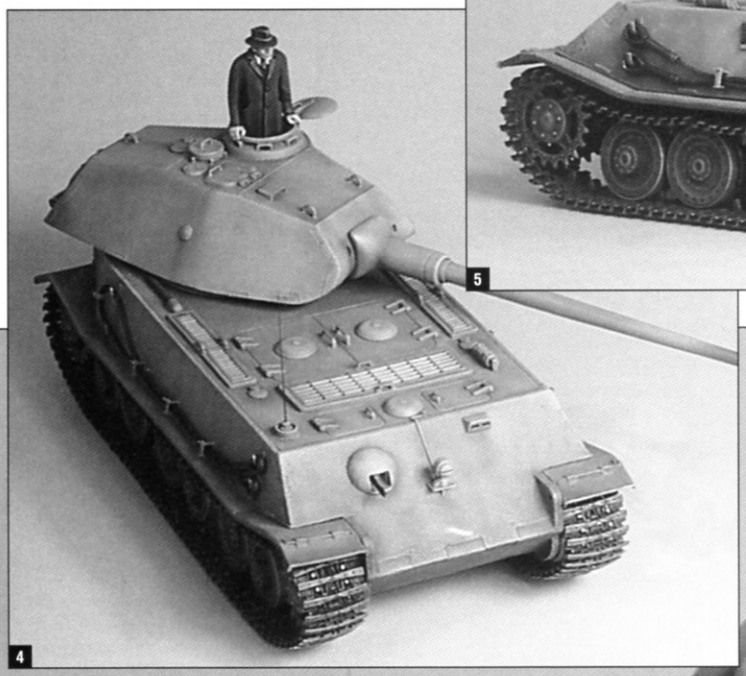
I was able to solve this problem by using Friulmodellismo's Elefant track set. Although expensive, they are beautifully detailed and easy to assemble. In fact, they could be considered as a scale model in themselves. Friulmodellismo is a generous company and my set supplied sufficient links for the entire VK 4502 and for the spare track holder on the rear plate.

Prototypical painting

I decided to paint the model to represent a prototype. The Panzer was given an overall coat of Humbrol 94 dark yellow. The lower hull and rear was airbrushed with Humbrol 29 dark earth, allowing over spray to build up on the models upper decks to suggest the accumulation of dust and grime from the proving ground. When the paint had cured, several light washes of burnt umber and black oil paint diluted with white spirit was applied to the model to pick out the details.

I then followed with a light dry brushing with the original base color of dark yellow. Rust and grime streaks on the turret sides and hull were applied with

4, 5, 6. The finished kit. Cromwell's molding was first rate throughout. This is especially evident around the engine deck. The VK4502 was quite a modern design for its time. Note the way the slanted turret mated with the reverse slanted back end. Although this variant was never produced, strong evidence suggests that prototypes of the forward mounted turret version were produced and running before the end of the war. Inspired by wartime photos, I decided to add a figure to represent a certain disappointed German professor...



artist's pastel powder. A finish coat of matte varnish completed the painting and weathering process.

To give the model a sense of scale, I have added a crew figure to my model. The figure was adapted from the portly Volkssturm figure supplied in a Verlinden set and has undergone a certain amount of facial remodeling. As they say at the cinema, any resemblance to a certain disappointed Professor is purely coincidental!

—Fraser Gray

MMiR RECCE

Cromwell Models VK 4502 (P2) Conversion kit. Kit number CA43. Suggested retail price £43.50 (about $70.00).

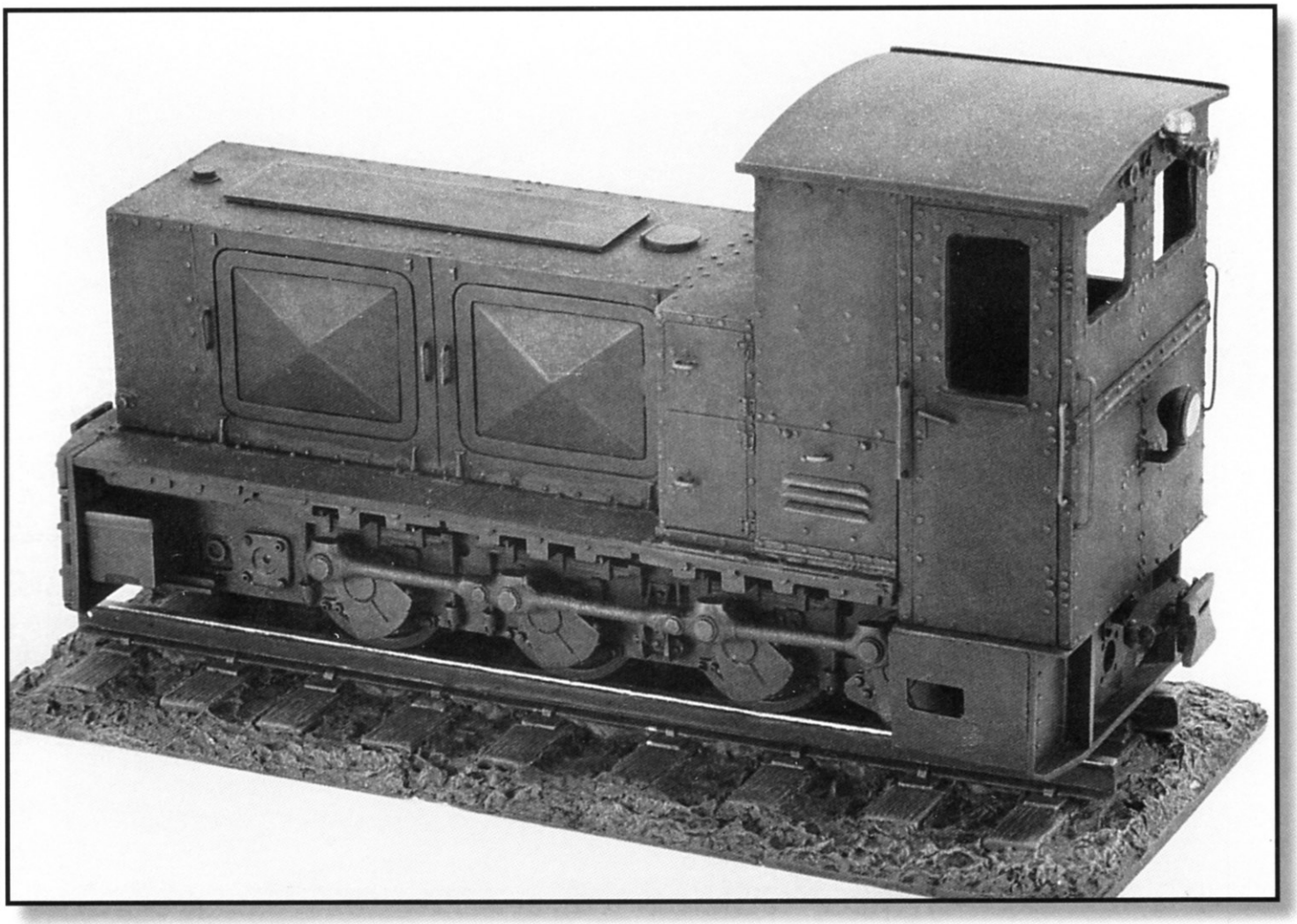
References

Der Panzer-Kampfwagen Tiger Und Seine Abarten by Walter J. Spielberger, Motorbuch Verlag 1994. ISBN: 3-8794-3457-3.

Germany's Tiger Tanks VK45.02 to Tiger II: Design Production & Modifications by Thomas L. Jentz, Schiffer Publications 1997. ISBN: 0-7643-0224-8.

Love me tender

COMMANDER MODELS WORKS THE RAILROAD ANGLE WITH ITS NEW SWITCHING TENDER



Photographs: Barry Beaudry

Commanders Series Models German Railway Tender or switcher is a full resin kit, which also includes a nicely detailed resin roadbed and track display base. I could not find any references on this little bugger but, from what I can tell, it is diesel mechanical powered and side rod driven. The tender was not used on the open standard Deutsche Reichsbahn railway, but was used on local small gauge railways such as those installed in munitions dumps or training areas. Anywhere where there was a consistent need to move heavy stuff around.

Although they weren't used by the Reichsbahn, they did serve a more sinister purpose and this was to move the V2 rockets from their underground hideaways to their launching areas. There was also a special narrow gauge transporter for the rocket. This may be even more obscure than the tender!

The surface detail is very good, as is the fit of the parts. With a minimal amount of effort this kit could be built in a very short time. In fact, most of your time will be spent drilling out the pre-located holes for the various access panels and grab handles.

The wheel trucks and wheels are cast together, with the lower frame and resin pin holes very few. The wheel counter weights and side rods are sepa-

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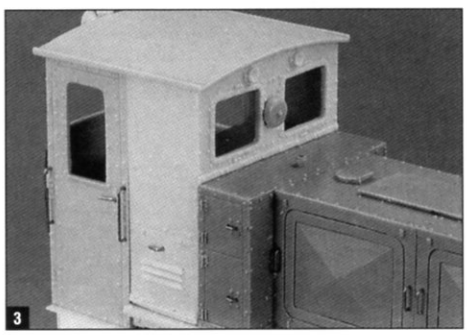

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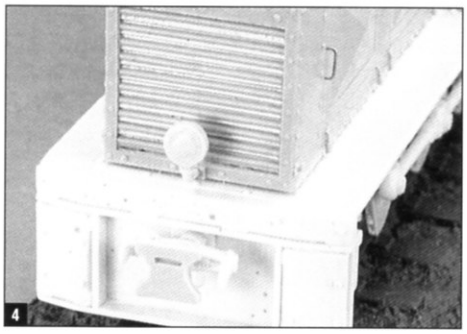
1. This is all the parts as they come out of the box. Not a terribly complicated kit, as resin kits go. 2, 3. Much of the time spent in building this kit is on the large number of grab handles for all the various hand-holds and access panels. Case in point here; the front and rear of the cab. 4. Surface detail on the kit is good. This is the front engine grate. 5. The tender was rod driven. It's smaller gauge did not permit it to be run with other stock, so watch how you mix it. 6, 7, 8 & 9. The finished model. The tender was painted straight flat black and I jumped right to the weathering phase. I figured a work-yard tender such as this would be pretty grungy. Lots of burnt sienna and burnt umber washes were involved.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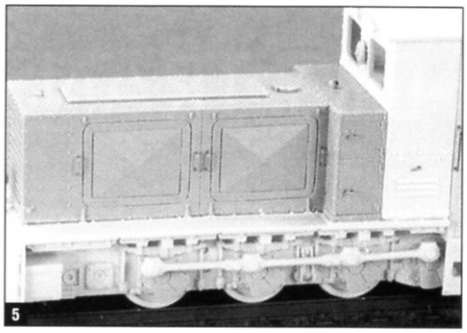
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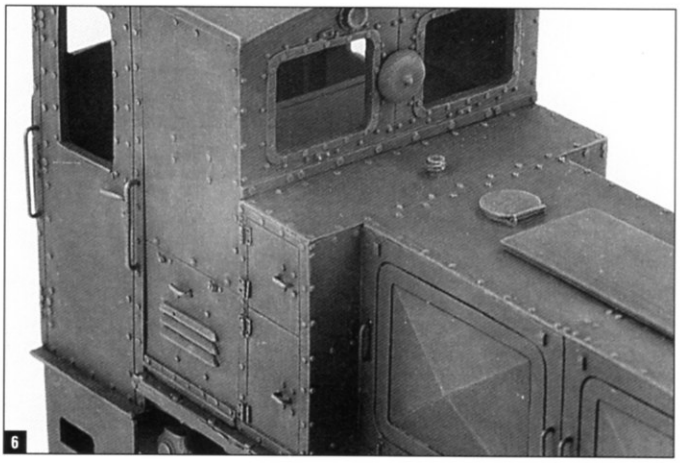
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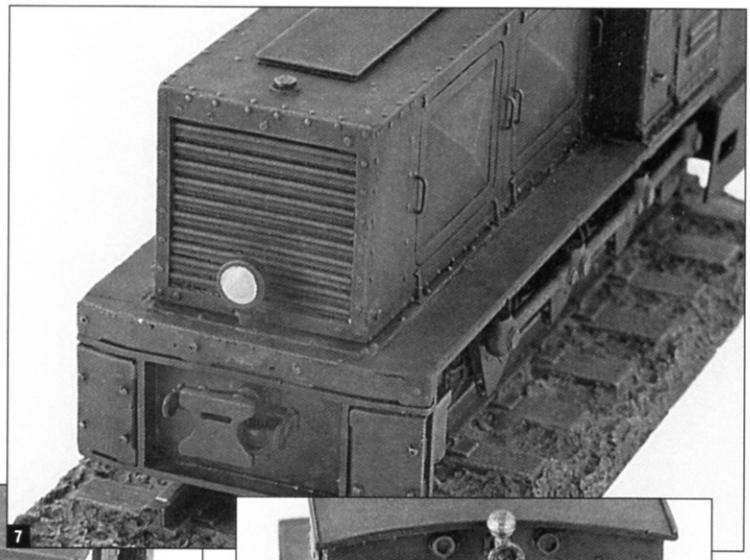
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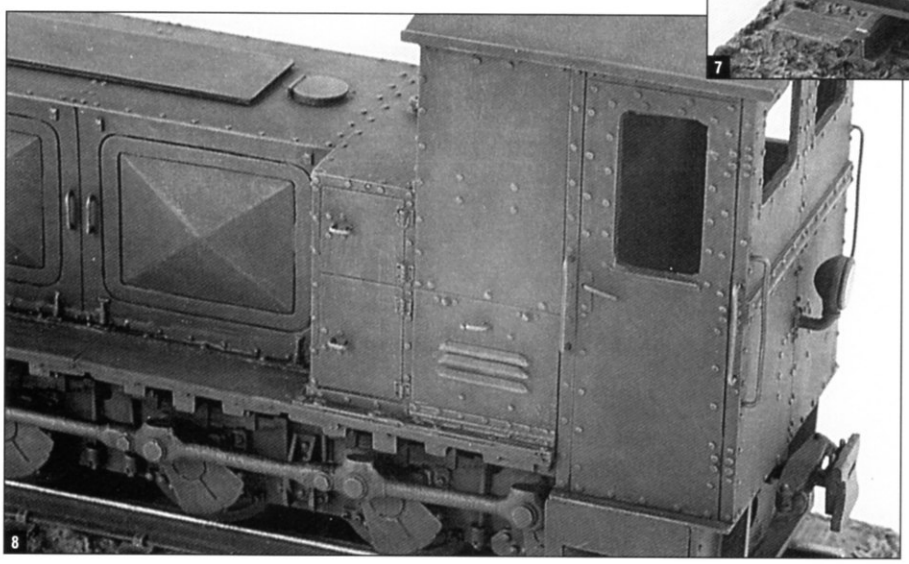
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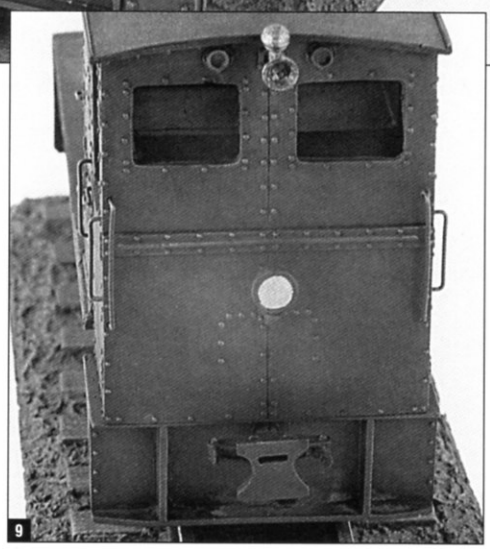
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rate and require very little clean up.

The interior has plenty of potential for detailing but, as it comes out of the box, there is no detail at all. The windows are cast open but no window glass (clear styrene sheet) is supplied. Have fun finding info on this interior...

The kit-supplied lights are cast nicely but the face is quite rough. MV lenses are definitely due here; #200 lens should do it, a wee bit under 1/2 inch.

I think I can...

Assembly was straightforward, so I won't bore you with how I glued part number this to that. On to the paint and grunge. The model was base coated with flat black enamel. An overall wash was applied, with a mix of burnt umber and flat black. A selective wash was also applied with straight burnt sienna to simulate rust in the low areas. Various dark and medium grays were dry brushed next over the entire model to simulate highlights. Because this engine would probably be chuggin' around in a dirty, rusty work-yard, I took straight burnt sienna and very lightly dry brushed the upper surfaces to give the appearance of soot and foundry dust. Model Master armor sand was very lightly dry brushed to simulate regular dust. To finish up, I took Testors silver and a no. 2 pencil to bring out any bare metal areas that would appear from frequent use and abuse.

The track display base was first painted grimy black, with Humbrol 29 being used on the railroad ties. The rails themselves were painted with Humbrol 173 track color and the tops of the rails were painted with Testors Silver. After a final coat of Testors Dullcote, I took a no. 2 pencil and polished the tops of the rails. This gives an excellent polished effect, very much like the real thing.

All in all, this was a simple and enjoyable build of a very rare German railway switcher. Hey! This could be the beginning of a very TENDER diorama!

—Barry Beaudry

MMiR RECCE

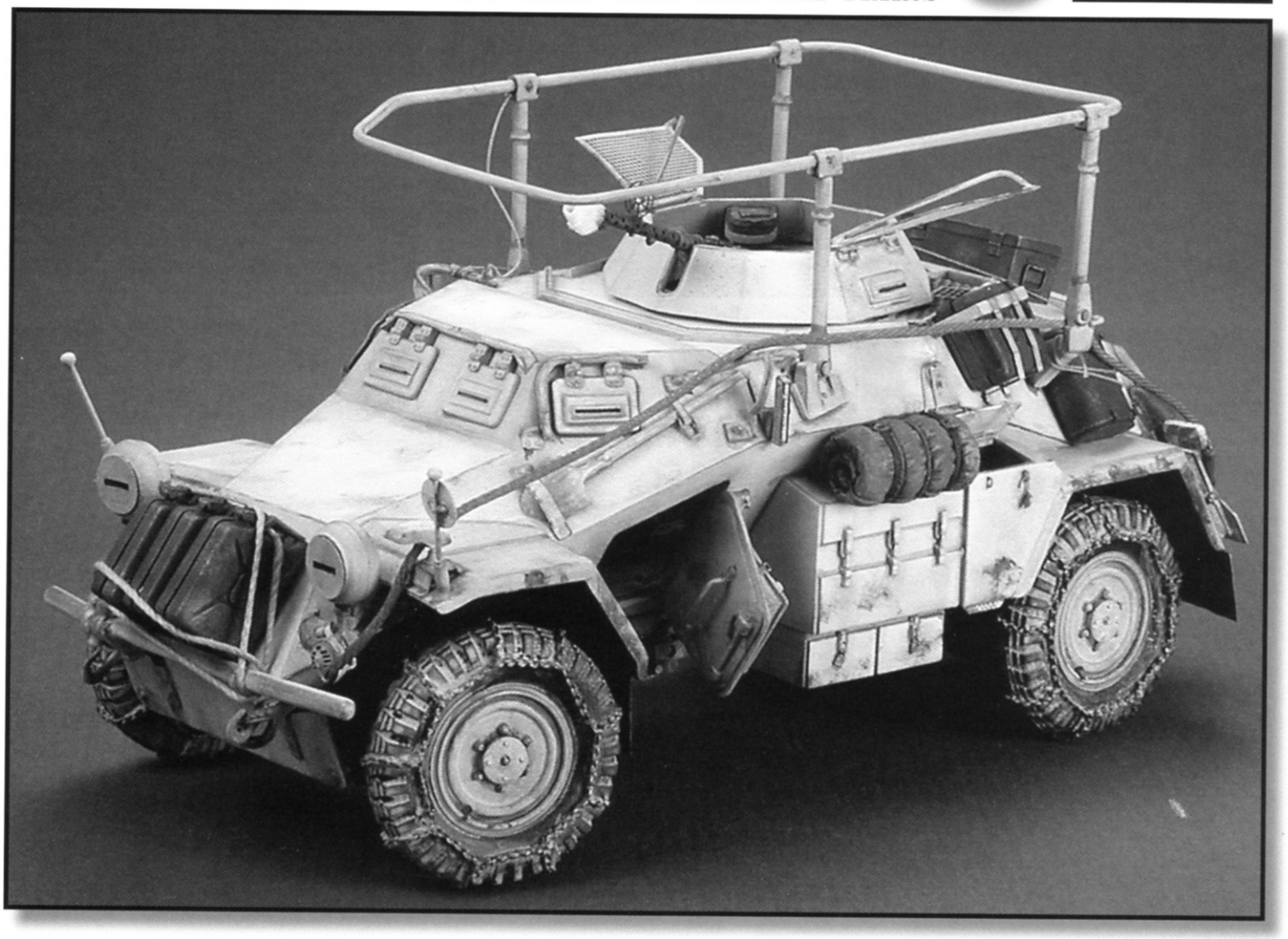
Commander Series Models German Tender Engine. No kit number listed. Kit graciously provided by the manufacturer. Suggested retail price $80.00.

References

Weapons of the Third Reich, Doubleday & Co., 1979 ISBN 0385 15090 4. Long out of print, this contains the one dark picture of the tender being used with the V2. Checking in unlikely places could also be helpful. Because of its use, it could pop up in an unrelated publication.

Winter Wagen

ANOTHER BLAST FROM TAMIYA'S PAST GETS ALL THE FIXINS



The Sd.Kfz. 223 Leichte Panzerspahwagen traces its origins to the mid-1930's, when early armored cars were mounted on automobile chassis. Early armored cars of types Sd.Kfz. 13 and 14 gave way to the 221, which in turn underwent wartime modifications to become the more well-known 222 and 223 series. While both vehicles had a primary reconnaissance role, the 222 mounted the ever popular 2cm Flak 38 in its turret, while the 223 sported a smaller turret, one MG34 and heavier radio equipment. With its three man crew, the 223 saw service on all fronts of the war, although production ceased in January 1944 in favor of the more versatile 250 half-track series. A total of 550 223's went into service, with six different series being produced.

Chapter One: Pat Is Born

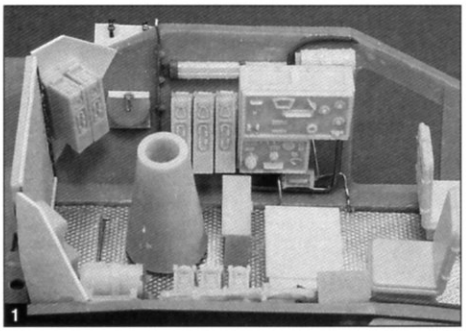
Tamiya's Sd.Kfz. 223 is another one of those classic kits that is so good, no one else has ever bothered to produce it. Although it's over 25 years old, the accuracy and level of detail are still impressive. Interestingly, a major photo-etch detail set has never been released for this kit. Show Modelling is the only etch company to give it a whirl and, while fairly small, their set offers some fabulous replacement screens for the turret, as well as other minor details. Eduard, however, released a detail set for the 222, which has quite a number of usable parts. And then along came Tank Workshop a couple of years back with an interior detail set which generated a whole new interest in Tamiya's kit and which has since become one of TWS' best sellers. There's a cornucopia, yea, a veritable plethora, of resin goodies to pack inside this little armored car and with that being said, the modeler can go hunting to scrounge up various individual accessories to finish up the outside.

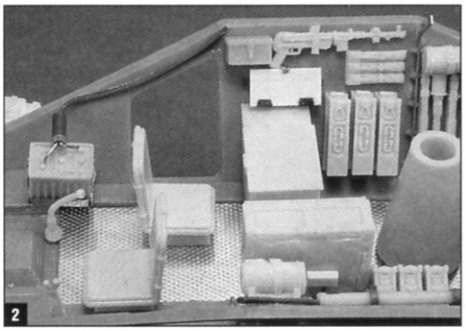
Book 'em, Danno

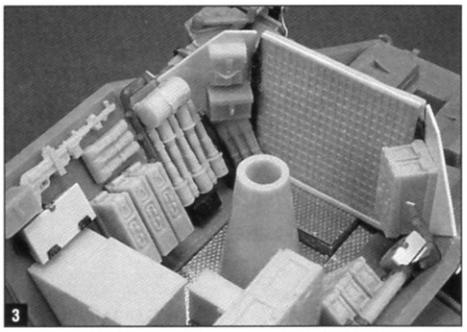
If you really want to dig into this kit, you simply have to have the Nuts & Bolts Volume 4. In their trademark fashion, the Nuts & Bolts boys have traveled the globe snapping photos of surviving 222s and 223s and there are plenty of interior shots to get your juices flowin'. By combining Tank Workshop's interior set and the Nuts & Bolts photos, you can get a good idea of where everything goes, including lots of extra little goodies to add. I spent a couple of evenings just comparing the resin parts to actual photos and used small Post-It Notes to mark specific details in the book.

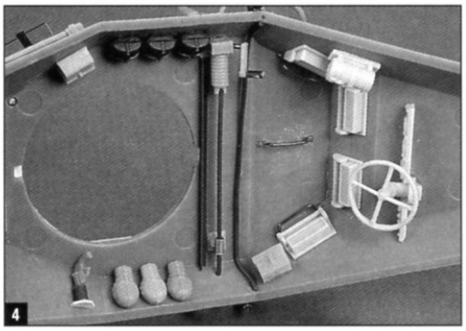
Department of the interior

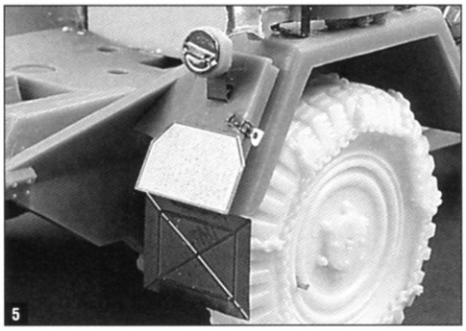
I whipped right through the undercarriage, which goes together perfectly, then went to work on the interior. TWS provides a resin tread-plate floor piece, which I replaced with Accurate Armour's diamond type photo-etched tread (#D08).

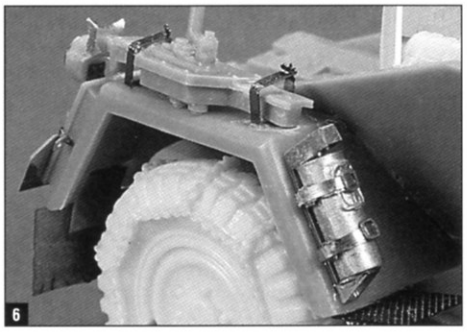


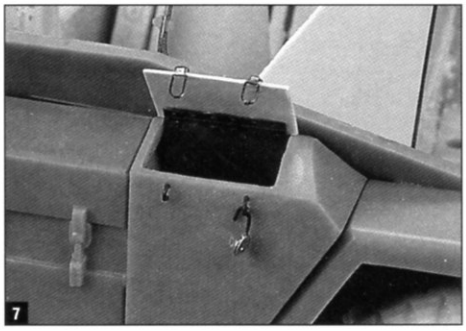


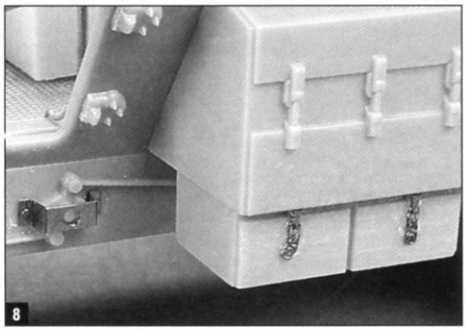




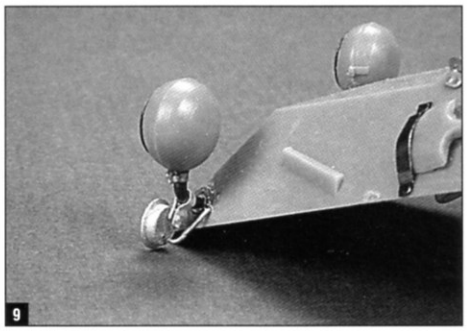


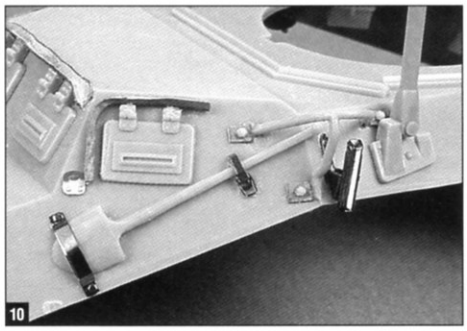


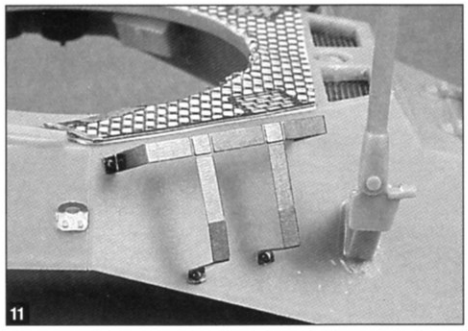




1, 2, 3. Several views of the TWS interior. Most of what you see here is from TWS, although I did add a few things of my own. A complete list is in the text. 4. More interior madness. The large cranking device is for the antenna and this is where the N&B book really helps. 5. The right rear fender after having been smacked with the photo-etched stick. 6. Details on the jack and that ever-so-cool Elefant multi-piece fire extinguisher. 7. I couldn't resist opening up one of the many hull stowage boxes. Eduard provides the etch. 8. Some of the lower hull details, again, compliments of Eduard. 9. New wiring and an Elefant white metal siren dressed up the front end. 10. The rain gutters were completely rebuilt with lead foil







Installing either requires removal of Tamiya's turret mount, that big ol' tapered post growing out of the floor. Next came TWS' firewall, which received a frame made from Plastruct. The firewall went through plenty of test fittings and is the key ingredient to getting everything else right. I located some spare photo-etched wall braces in the parts box, which I believe were originally for a 251; a nip, a tuck and a handful of Grandt Line bolts and they went in next. These are also key, as they need to fit exactly into the hull joint. Adding these brackets caused several adjustments in the TWS components.

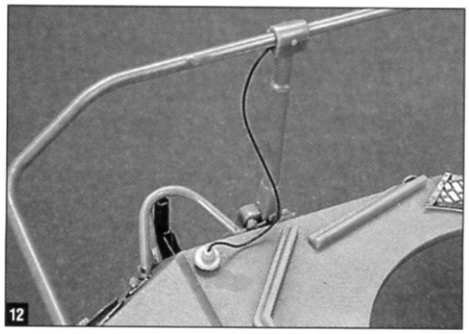
Without boring you to tears, I'll refer you to the in-progress photos for a look at what TWS provides. Along with their healthy list of parts, I added the following: MP40 pouches, MG38 tool pouch, radio frame and wiring harness, headset, breathing tube, MG38 spare barrel container, flare pistol, and battery. Also added were numerous minor brackets, plus several smaller boxes that are evident in the N&B photos, containing such items as flares, spare glass blocks for the visors, etc. Nuts & Bolts states that there were 12 ammo cans inside the 223 and TWS thoughtfully provides all 12; however, I only got 8 of 'em to fit in there and 4 went into the parts box for another day. Three handles were fashioned from copper wire and added to the interior roof. TWS' mounting post for the turret was left out until the turret was completed, to ensure proper positioning. The N&B photos also provide excellent coverage of the cranking device, which runs the width of the interior roof and which allowed the large frame antenna to fold down below the silhouette of the vehicle. I spent a while rooting around in the parts box and came up with a pretty good copy fashioned from 11 pieces, origin unknown. Also up top, the two intake screens were carved out and replaced with spare etched mesh, along with a new fuel cap between them and a fuel reservoir underneath.

Throughout all of this, it was necessary to test fit the upper and lower hull halves approximately 17,000 times. There's a lot of stuff in there and in addition to parts hampering the fit of the hull, every drop of glue adds a new degree of tension to the plastic and can create bizarre stress on the integrity of the model. At this point, there's a definite weight factor developing in this little cutie.

Meanwhile, back at the ranch...

The exterior is where the Eduard set for the 222 really comes in handy and also presents a challenge. Lots of latches and locks were added to the

cargo containers and I just couldn't resist opening one up. Doing so required adding styrene walls to the interior of the left side cargo box bank. Eduard latches, plus a piano hinge from their new hinge set, (#35245) were just the ticket. The large grab handles on each side were dressed up with new mounts and Grandt Line bolts and Eduard's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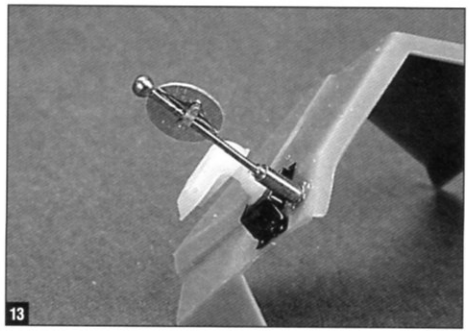
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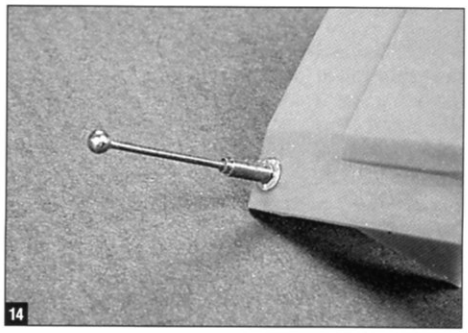
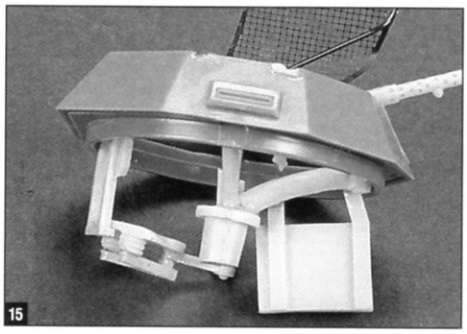

14

strip using the N&B book as a guide. 11. One of the Eduard fuel can holders positioned on the left side of the hull. 12. An obvious, but sometimes overlooked item; the wire for the radio leading down into the vehicle. 13, 14. A detail marriage made in heaven. Jordi Rubio mudguard poles mated with Royal bases and a Show Modelling mirror. Amen. The Notek light is yet another replacement item from Elefant. 15, 16. The remarkably complex TWS turret interior. It was a bit confusing to build, but it only goes together one way. The MG 34 is a VP item and the screens are from the Show Modelling set. The right side screen was MIA for the photo shoot. Thankfully it turned up later!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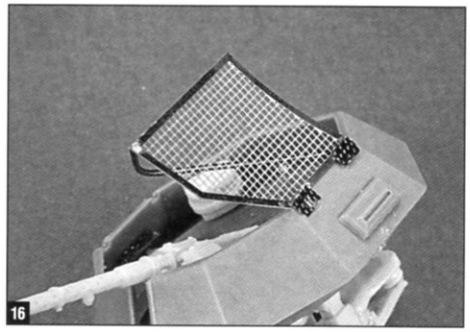
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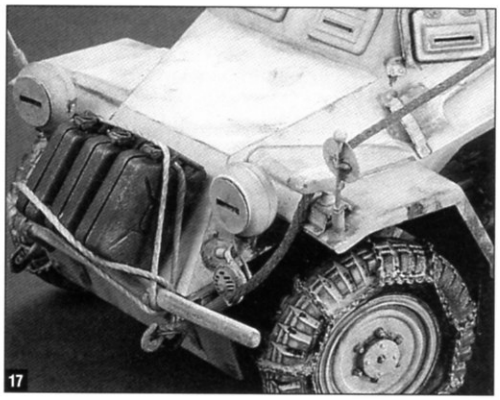
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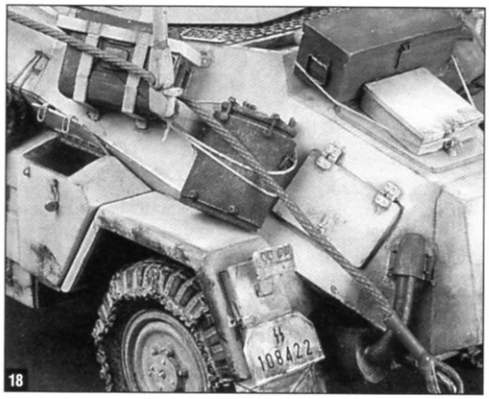
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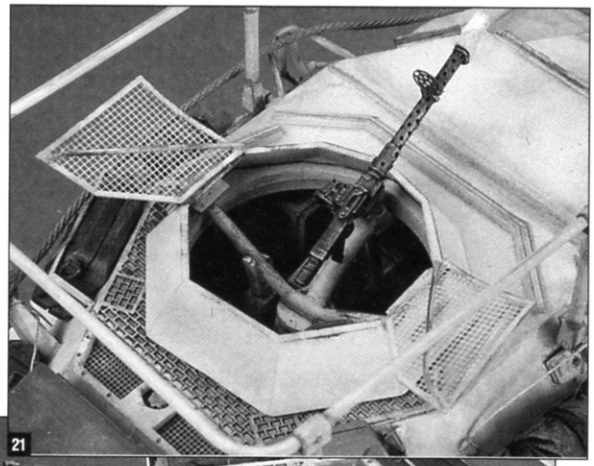
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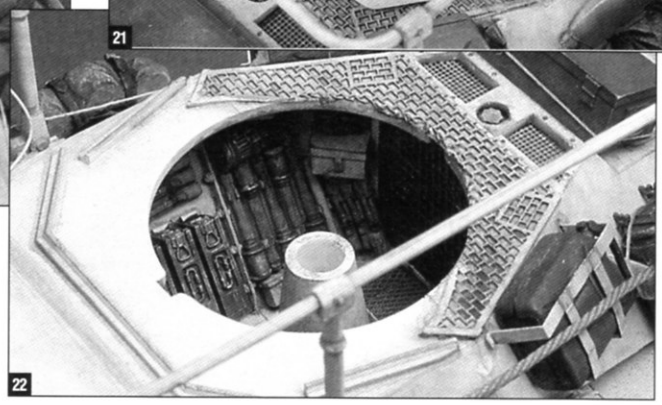
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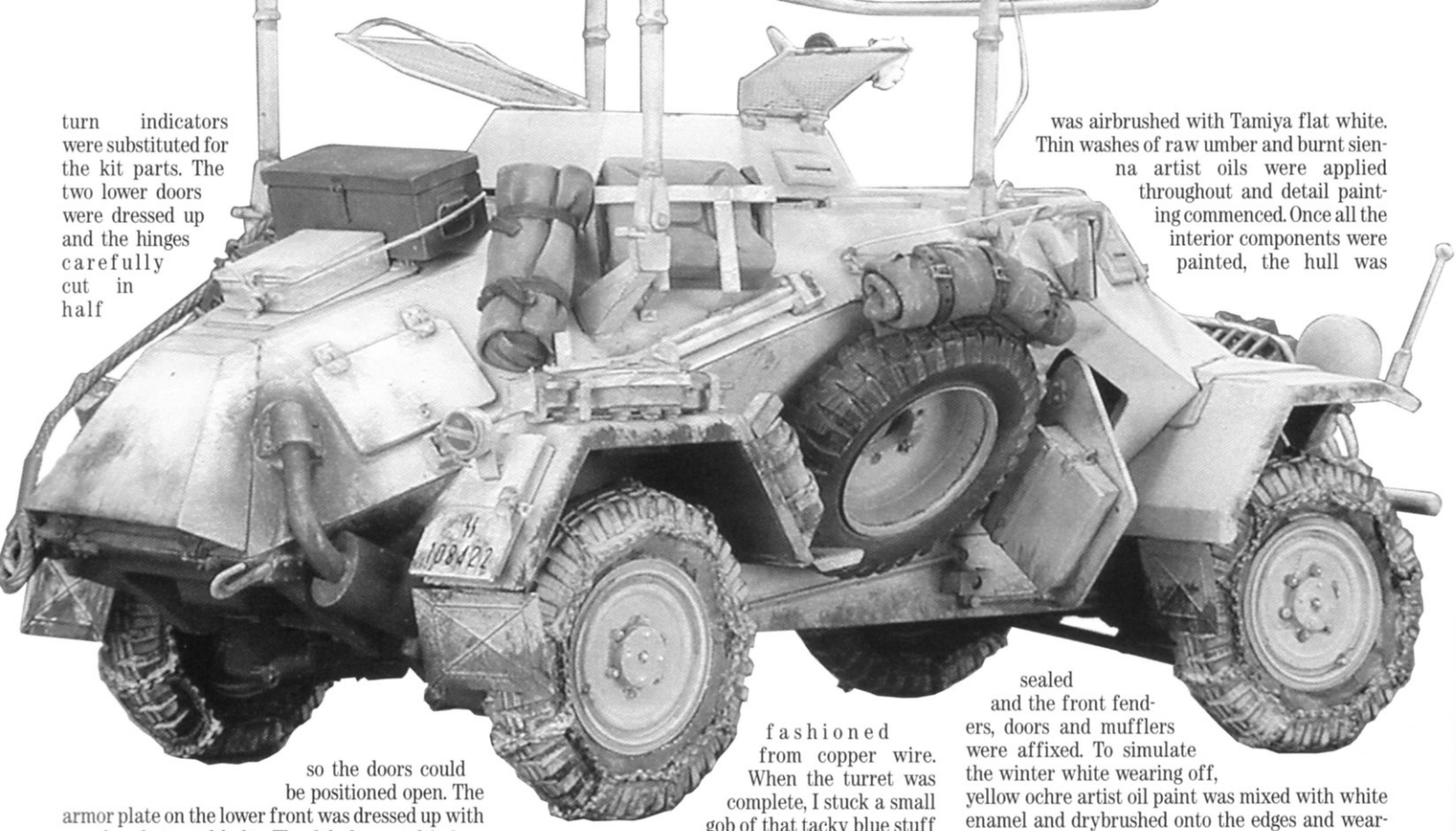
17-19. Exterior was brought to you by the friendly folks at GREIF, Plus Model, VP and Custom Dioramics. Most of it was lashed down with model ship string. The fuel cans on the front end are from Tamiya's newer accessory set. The tow cable is another GREIF item. 20-22. A few views of the finished turret and its parking space. In shots 20 and 22, it's possible to glimpse the many added interior items. Not mentioned in the text are the map and headphone in shot 20. Unfortunately, unless the turret is removed, most of this stuff is nearly invisible. But, I'll know it's there!



turn indicators were substituted for the kit parts. The two lower doors were dressed up and the hinges carefully cut in half so the doors could be positioned open. The armor plate on the lower front was dressed up with new brackets and bolts. The fabulous multi-piece fire extinguisher from Elefant (#35414) replaced the kit offering and the kit jack was dressed up with the Eduard brackets and some extra goodies from one of Aber's tool sets.

The rain gutters, shown in Nuts & Bolts, were often pretty rough and prone to abuse. I carved the gutters off of the four visors and fashioned new ones by folding lead foil strips over the dull side of a hobby blade. Four spare tie-down hooks were found on a scrap etch sheet and added to the hull. Eduard's fuel can holders were positioned on each side. The rear fenders were next. The two taillights, mud flaps and license plates were all attached. The front fenders and mufflers had to wait until the interior was painted and the hull sealed. Both headlights were rebuilt using Show's blackout covers, plus new collars and wiring and a horn from Elefant (#35466). A new Notek light was also added, again from the good folks at Elefant (#35316). Jordi Rubio mudguard poles (#AC01) were combined with etched bases from Royal Model (#088) and Show's mirror finished off the front end. Last but not least, Tank Workshop wheels with chains were attached, after adding valve stems made from wire.

Up on the roof

The 222 and 223 have different configurations on their upper deck and Eduard provides a truly marvelous piece to replicate the mesh grating around the turret. This was presumably provided for traction and is not "see through" screen. By careful trimming, I came up with a reasonably close version of the grating for the 222 and glued it to a sheet of super thin styrene. (If you try to just glue the grating onto the Tamiya hull, it looks ridiculous.) Tank Workshop has done a dandy job of filling up the turret with the commander's position and MG34 mount. It's a bit fussy and the instructions are somewhat vague; but it only goes together one way and I eventually figured it out. The machine gun was replaced with a modified VP version and those nifty mesh screens from Show were attached. I used Eduard hinges and braces fashioned from copper wire. When the turret was complete, I stuck a small gob of that tacky blue stuff onto the mounting post and was able to correctly position the turret mount on the floor of the interior. The antenna went on right out of the box; it's remarkably accurate and rebuilding it wouldn't do much to enhance it. A plug for the antenna wire was added to the roof and the antenna was wired for sound.

Paint your spahwagen

At this juncture, I had several subassemblies: the upper and lower hull halves, the turret, two side doors, two front fenders, two mufflers and the spare tire. Having decided on a winter scheme, all pieces were sprayed with Krylon white primer right out of the can. The underside was airbrushed with a dark brown/gray blend of Tamiya acrylics. The interior was then airbrushed with a Polly S interior blend of blue/gray/cream and the exterior was airbrushed with Tamiya flat white. Thin washes of raw umber and burnt sienna artist oils were applied throughout and detail painting commenced. Once all the interior components were painted, the hull was sealed and the front fenders, doors and mufflers were affixed. To simulate the winter white wearing off, yellow ochre artist oil paint was mixed with white enamel and drybrushed onto the edges and wear-heavy surfaces. Metal wear and rust spots were also added. A heavy wash of Tamiya white was applied to the tires.

Although many accessories auditioned for the part, only a few select pieces of stowage made the final cut. A mix of GREIF, Plus Model, VP and Custom Dioramics parts were lashed down with shipbuilder's string and five fuel cans from Tamiya's accessory set (#35186) were put in place. A GREIF tow cable was dressed up and draped from front to rear and a piece of damp tissue was used for a muzzle protector on the machine gun.

And the count goes on

For such a relatively small vehicle, the detailing possibilities are fantastic. The final tally was one Tamiya kit, plus 381 additional pieces.

—Joe Porter

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Tamiya Sd.Kfz. 223 Leichter Panzerspahwagen (Fu). Kit number 35062. Currently removed from the Tamiya lineup, but you've probably got six in your closet. Suggested retail price $8.25

Tank Workshop Sd.Kfz. 223 Interior. Kit number 2034. Suggested retail price $20.00

Eduard Model Accessories Sd.Kfz. 222 Detail Set. Kit number 35115. Suggested retail price $14.99. Designed for the 223's sister vehicle, but 95% of the parts fit here as well.

The Show Modelling Sd.Kfz. 223 Detail Set. Kit number 094. Suggested retail price $9.95.

The Tank Workshop Sd.Kfz. 223 Wheels with Chains. Kit number 2048. Suggested retail price $6.50.

Additional individual details are specified in the text.

References

Nuts & Bolts, Volume 4: Sd.Kfz. 222 & 223. Nuts & Bolts Publications, 1996. If you're going all the way on the 223, this is the one. Marvelous inside and out pics of surviving vehicles, plus some fine 1/35 line drawings.

German Light Reconnaissance Vehicles Schiffer Publishing, 1993. Handy reference packed with photos detailing the historical development of the light armored car series. Good all-around exterior photos of the vehicles in action.

Militarfahrzeuge of the Wehrmacht, Volume 1. Ryton Publications, 1997. Uwe Feist's pictorial reference includes some great shots of the 223.

Encyclopedia of German Tanks of World War Two. Arms and Armour Press, 1993. Did you get yours yet? The definitive reference also includes chapters on armored cars and the 223 is found on page 194.

Picasso's Panzer

DML'S STUG G GETS THE DETAIL TREATMENT AND A WACKY PAINT JOB

Photographs: Raf De Bont

Being a WW II German stuff freak, I was always interested most in their enormous battle-tanks, like the King Tiger, or in their weird looking science-fiction designs. Smaller and more normal looking vehicles never managed to get on my 'have to build that one'-list. Only when I purchased number one of the "Panzer Color" trilogy (by the way, they make very good reading and are highly recommended), one special picture of the otherwise boring and normal looking Sturmgeschutz III caught my eye. This one had a very special camouflage scheme, with both soft-edged brown and hard-edged weirdly-shaped green spots on a dark yellow base. The photograph was used as an example to prove that, sometimes, nearly anything goes in WW II German camouflage (which is the subject of the entire book) and the caption suitably stated that "Picasso obviously had an admirer in this crew."

With my interest in this subject awakened, I read some more and found some other modeling challenges among the other photos: concrete protection on the forward upper hull armor, shark's teeth on the saukopfblende and, best of all, waffle plate zimmerit! As I wanted to portray all these elements in one vehicle, I decided not to slavishly follow the initial inspiration picture but, instead, create my own vehicle with the special StuG III gimmicks.

Don't misunderstand me, historical correctness is still of importance to me and I checked my references that every element existed at least two by two (for example: waffle zimmerit and saukopf) on some vehicle.

You might have guessed by now that I don't start modeling because of the beauty of a kit, but because of what I can do with it and the challenges that lie within it. The following text is not another kit review, but rather the diary of a modeling project with special attention to the main challenges. I will also not insult your knowledgeable minds with another boring and too brief historical background of this well known vehicle. Right off to the building then!

Construction

The Dragon kit of the ausf. G was chosen because it depicts the late type with the saukopf mantlet. May it suffice to say that it is high quality (because of its Gunze Sangyo ancestry), except for the tracks. As these are crudely molded and don't fit at all, they were thrown out of the window (luckily my spare parts box happened to be right where they landed; you never now when spare tracks might come in handy, do you?) and replaced by Dragon's super-detail version. I needed to sand off the ejector pin marks on the bottom runs, but their detail is indeed super, especially when you consider their price.

As the rest of the kit is very good, building was very straightforward. I added some texture to the armor plates (where no zimmerit would come of course!) with a dental burr in my drill, going slightly heavier on the saukopf and the commander's curved cupola protection shield, as these are cast steel. The latter part also received a Milliput weld line to fix it to the roof and cupola.

As far as detailing goes, I only needed to refine some of the parts. Shurtzen supports, machine gun shield and blackout light support were replaced by thinner pieces I made from brass sheet. A couple of grills were fashioned from fine car engine mesh and plastic-card for the borders. The front fenders are made from pewter sheet (very good for recreating battle damage but sturdy enough to withstand some fierce paint brush-fighting) and the shurzen plates are made from plastic sheet, as the guys at Dragon didn't even try to replicate the shurzen in the first place. No problem, I would have replaced them anyway! And that is also what I did with most of the tools, being inferior to the superb Tamiya Panzer IV set. Clamps were fabricated from lead foil and copper wire.

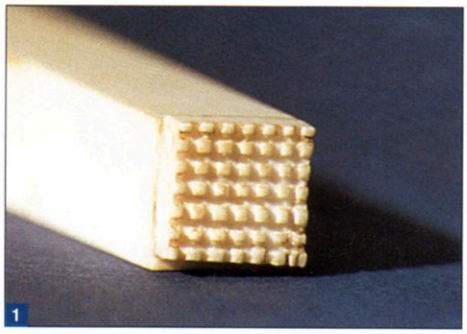
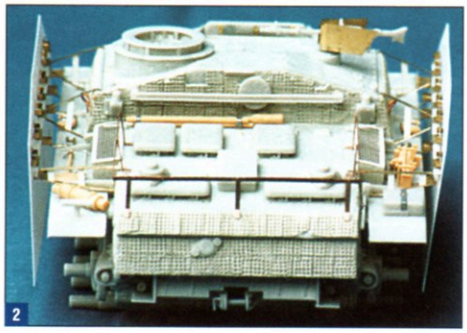
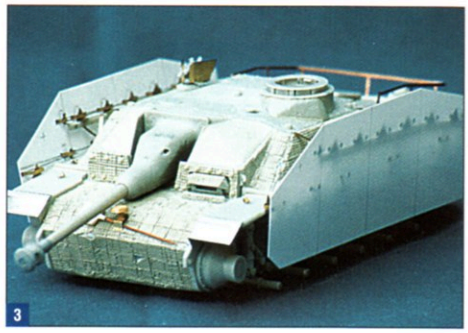
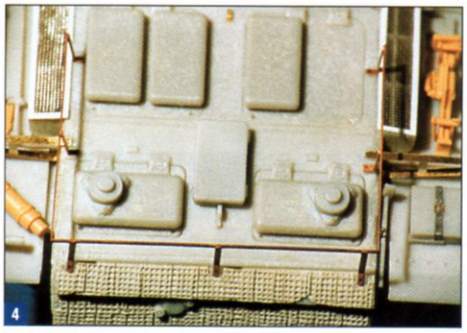
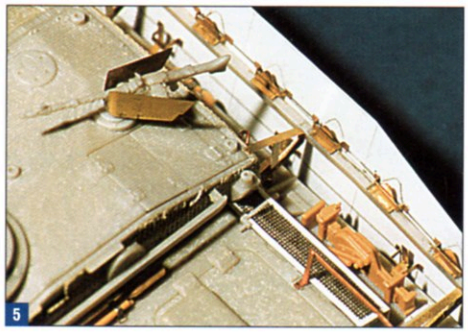
Note that I didn't use any photo-etch or other expensive add-ons: cheap guys, this project is for you! Well, so much for the regular stuff. Lets see what else we can do with this little baby!

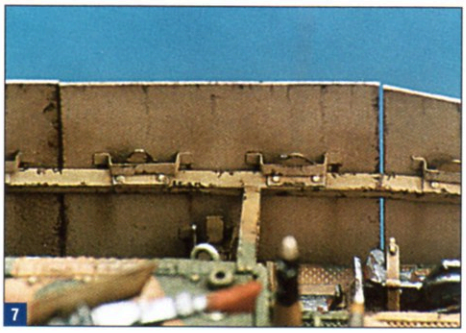
Tasty zimmerit

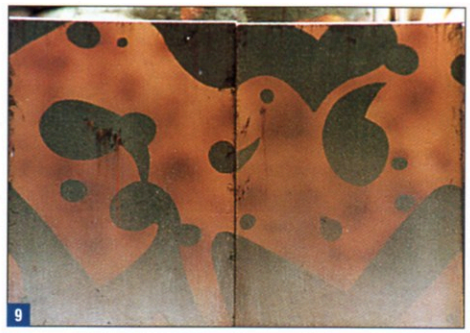
The special waffle plate zimmerit was only applied in the Alkett factories and is a common sight on many later StuG's. It also presents a real challenge for the modeler. There are two ways of doing it: creating it yourself or letting someone else do the work for you and buying a paper or resin zimmerit set. As I am more adventurous (and, as my pub-mates will confirm, also cheap), I opted for the hard way: making my own.

In my view, the only route to success is a special zimmerit-stamp. Their are several examples available, but they always comprise four squares, which is not very convenient for the tight spots. And so I made my own.

No, please! Don't run away! It is far easier than it looks! You just need some two millimeter thick





1. This is my home-made zimmerit tool, made from plastic card. 2. The rear of the unpainted vehicle. The zimmerit pattern is evident. 3. The unpainted model showing my scratch-built side skirts, again made from plastic card. 4. All of the armor plating was textured with a dental burr. This is the rear engine deck. Also note the stowage rack made from brass strip. 5. The shurtzen support system, made from thin sheet brass and plastic stock. 6. The finished front fender, made from pewter sheet. This is thin enough to look realistic, but sturdy enough stand up to drybrushing. 7. The finished and painted shurtzen system. 8. The shark's mouth was hand-painted using Vallejo acrylics. It was actually pretty easy. 9. A close-up of the "Picasso" pattern, also all hand painted with Vallejo acrylics. Note how the different colors blend together slightly.

plastic-card and a Stanley knife. Turn the knife upside down (that's right, with the non-cutting edge on the plastic) and start scribing parallel lines in the plastic-card with the square side of the knife. Then turn the plastic-card 90 degrees and carefully scribe a new series of lines. Study your references for the right dimensions. What will remain then is a small field of square protrusions. Cut out an appropriate square and mount this to some kind of handle (in my case a piece of plastic bar) and presto: your waffle iron is ready!

I bought my zimmerit paste in the form of Milliput epoxy putty, but any other medium can be used. I have seen people do it with thinner-based Tamiya putty. Spread this over the appropriate surfaces as thinly as possible and stamp the pattern in, keeping the stamp nice and wet to avoid putty sticking to it. After leaving the Milliput to stiffen for 30 minutes, I impressed the separation lines with a chisel-shaped knife. And that's it! At least if you do only one surface in one modeling session, I didn't and had to re texture some ugly fingerprints.

While the Milliput was out, I also recreated the concrete extra armor in front of the fighting compartment. When the putty had cured, I textured it heavily with the drill bit.

Painting

Before you open the paint pots, it is always a good idea to spend an evening with (color) pencil and a plain version of the kits painting guide to design your camouflage pattern. Having the airbrush in one hand and your carefully built model in the other, with no idea what the eventual finish should look like, is a recipe for disappointment. This was especially true for this scheme because in the picture, the pattern is only clearly visible on the right hand shurzen. Making up the rest made me feel a little like Picasso himself!

I first sprayed the base yellow, which I mixed from Tamiya acrylic Dark Yellow, Dark Brown and White. The final result should be lighter than the Tamiya dark yellow to allow for scale effect and to contrast better with the camo-colors. Over this I applied numerous small red-brown spots with the airbrush.

Now the green ones! I decided against masking and spraying because of the enormous amount of work involved (next to cheap, I am also a bit lazy) and resorted to hand-painting. As I wanted an acrylic base-coat to withstand the rigors of washing, I chose Vallejo Model Color paints, a medium new to me. These paints brush beautifully and have great covering qualities, but need care to keep the right consistency. Just keep a cup of water handy. Because of the care needed to complete this scheme, it really took a lot of time and patience to get it right (is it too late to take the 'me-lazy'-part back?). Next, I quickly drew my airbrush out of its holster and misted a very thin coat of the base yellow over the unaware StuG. This makes the camouflage colors blend in nicely.

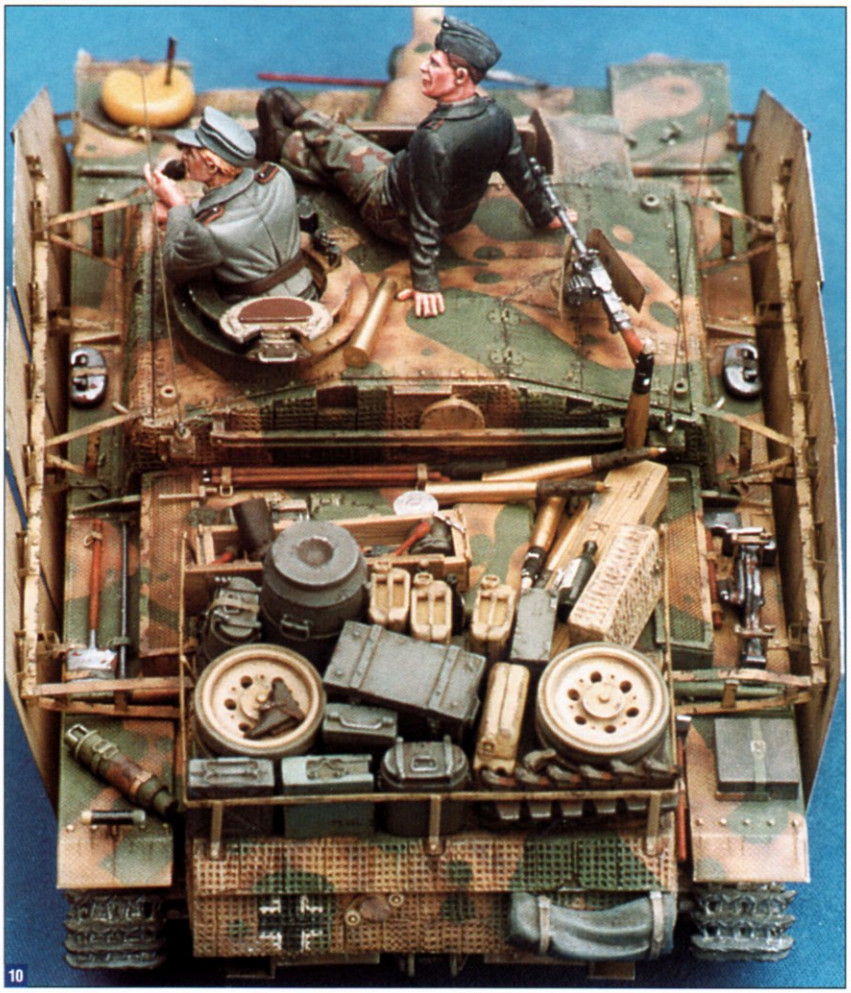
Next were the markings. As I really hate decals, it was a relief to find out that late war StuGs didn't have all that many markings. Only one national cross was hand painted with Model Color acrylics on the back. But I also wanted those beautiful shark's teeth! Hand painting them turned out much easier than expected. First I painted the entire mouth white. Then I painted in the same shape, but more slim and in red. After that, it is just a matter of painting red triangles to complete the teeth!

I imagined this particular vehicle driving in summer through the hot Ukrainian steppes at the eastern front and as so, it would need a nice coating of light colored dust. This was mixed from Tamiya acrylic Flesh and Sky and airbrushed on the lower parts of the vehicle and the shurzen.

Weathering

The dusty machine looked like it needed a wash and that's what I gave it, using raw umber oil paints and white spirit. The seams and details were carefully lined with a small brush. But all this work only made it look more filthy and I tried to drybrush all the dirt away with lightened tones of the

10 & 12. Bird's eye views of the completed and painted model. It's dressed up with various VP stowage and the Tamiya solid brass shell casings. I made sure to take as much time as necessary to complete all these items, as I feel they can make or break a model. 11. Also very important is the inclusion of crew figures. In this case, more VP items, slightly converted. The vehicle will eventually be part of a diorama in which the preparation of food is the theme, hence the cheese on the fender.



different camo-tones. To make matters worse, this only made the details stand out! Just kidding, of course this is what I was looking for.

Some more weathering came in the form of rust and rain streaks, which are thin lines of raw umber and burnt sienna oil paints, applied with a 000-brush and the ends feathered out with a dry paintbrush.

To take this model a step further, I decided to experiment with paint scratches to give that heavy metallic feel to the model. Most articles I read tell you to use oil paint or moistened pastels and to apply them with a sharp brush. I thought it might be easier to just pencil them on. For this I used pastel-pencils you can buy in every good art supply store. There are softer and harder versions, depending on the brand. The softer releases enough pigment, but becomes blunt quickly, the harder doesn't need sharpening so much but it is sometimes harder to get some color on the model. Anyway, just choose a range of different tones, ranging from black over brown to burnt sienna, get a nice sharp point on them (test on your most annoying family-members) and start scribbling. Make sure to vary the tones as much as possible. The advantage of this technique over brush painting the scratches is the speed: it works much faster and allows you to put that time in more tonal variation (or watching the television) The lines I painted on with oils can also be done with this technique, as I discovered far too late. But hey, why not, I did some more.

The 'steel-feel' created by the dark and rusty scratches reduces the need for metallic scratches, but nevertheless they were also carefully applied, this time with a Berol Prisma Color silver pencil, which is in fact the same stuff as before, but metallic.

As if there were not enough pastels used yet, I ground up some more (this time the normal bar-type) and brushed it around the lower parts of the model to complete its dusty look (really fashionable every summer at the eastern front, I am told).

Dressing up

I bought the Tamiya brass shells and the Verlinden set for the StuG and dived into my scrap box to come out again with a mouth full of stuff that would create some interest in the otherwise plain back-yard of my StuG. I carefully painted and weathered them, as it is very important to take as much time as necessary for this. It would be a rude insult to your beautiful masterpiece to cover it with badly painted plastic bits. And believe me, it can take a lot of time. One tip to avoid losing interest in the gear when the model itself is already finished: do this while you are still working on the vehicle.

By far, the best way to bring life and scale into a model is the inclusion of crew figures. I believe they are a very important asset to every model and money and time invested in them is always well spent (at least, if you spend both money, which in my simplistic brain stands for quality, and time). My crew stems from the Verlinden family. As figure-painting is a whole new chapter, I believe it is best to refer you to more specialized articles. But please don't be afraid of it and have a go; you just need some practice and it adds so much to your model!

Oh, and the cheese? Well, it awaits a diorama in which the preparation of a meal is the theme. So much for the mysteries of this little sucker!

—Marijn Van Gils

MMiR RECCE

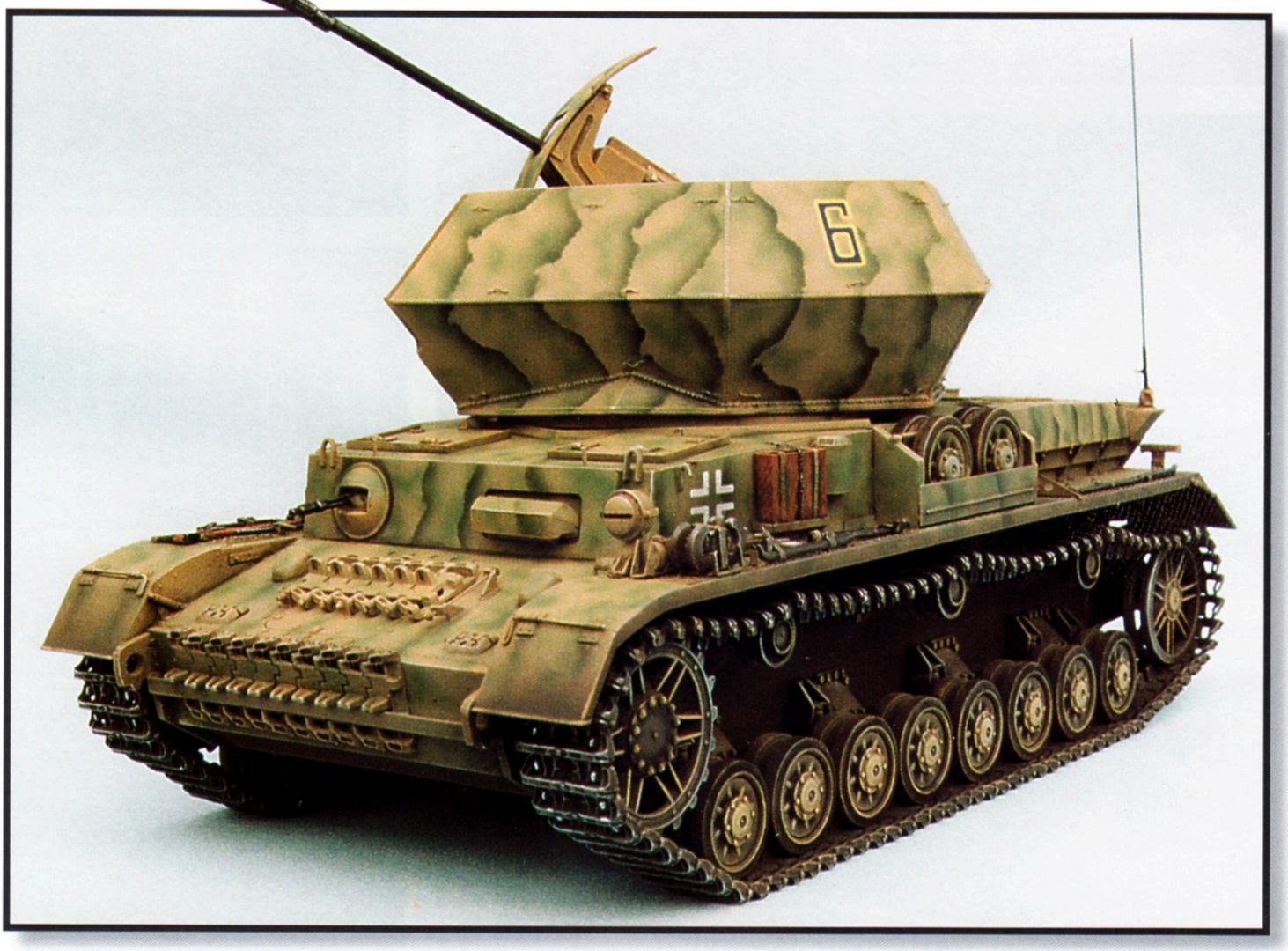
Dragon Models Ltd., StuG III G Late. Kit number 9014. Suggested retail price $34.98.

References

Panzer Colors, Camouflage of the German Panzer Forces 1939-45 by Bruce Culver, Squadron Signal Publications 1976. ISBN: 085368-450-2. The original of what would become three volumes.

Blown away, again

ANOTHER CLOSE-UP LOOK AT THIS ENIGMATIC GERMAN AA GUN



Photographs: A.J. Greenland

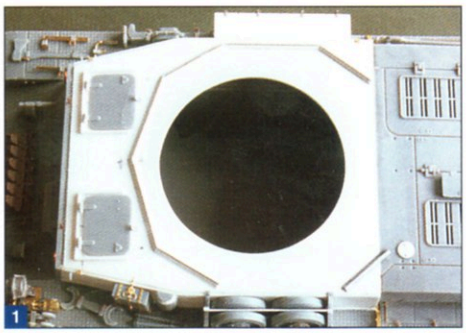
Regular subscribers of MMiR will perhaps be a little perplexed that your editor should have another article on the Ostwind within the space of the previous issue! However, I hope that this is sufficiently different from Thomas Anderson's article to justify its inclusion. After nearly 60 years, certain facts concerning this vehicle still remain obscure and contradictory. This obscurity has led to assumptions, not only regarding its development and deployment, but also about details on and within the vehicle. Even the numbers supposedly produced vary from as few as 7 up to 43. What is certain is that at present there is only one combat picture from the village of Nove Benatky, only 30 kms from Teplitz-Schoenau in the Sudetenland, where production was to have been undertaken. The theory was that the latest Pzkfw IV chassis from Krupp-Grusonwerk were to be used and would be the latest Ausf J version. Delays due to Allied action frustrated production continuously. Of the 100 ordered in the fall of 1944, as few as seven were actually produced (could have been more?). Tom Jentz is firmly convinced from documentation available that the lower figure is correct.

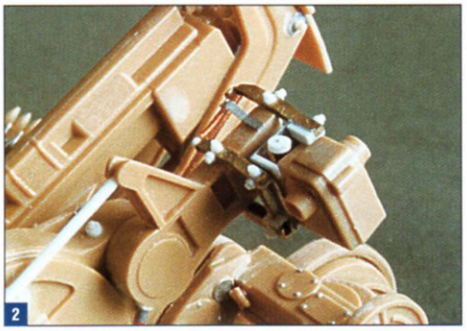
A remarkable fact is that Graf von Seherr-Thoss, former Technical Director of the Ostbau-Sagan works (original producers of the Wirbelwind) is still alive today and able to assist in certain details. For example, in Panzer Tracks No. 12 on page 12-42, it states that the Tiger Ausf E turret ring was adopted. Herr Seherr-Thoss refutes this as an error, which was unfortunately missed before publication. The authors also confirm this. What is certain is that the center of the turret ring was moved forward and also the radio operator's hatch. This ensured that the turret neither fouled the forward personnel hatches, nor the rear engine deck.

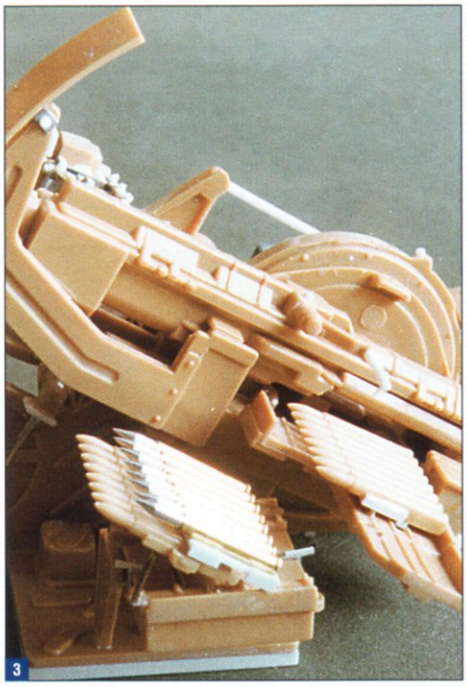
Other technical queries remain unanswered. The standard 3.7cm FlaK did not fit this turret. I found this out after constructing the turret and gun separately and attempted to install the two together. Herr Seherr-Thoss has since confirmed this fact; "The firing pedals were installed on the right hand side of the right longitudinal beam and not on the gun itself." It seems incredible that modifications had to be made to a standard gun at a time when Germany was already facing defeat. Once again the lessons of conformity and standardization had not been learnt.

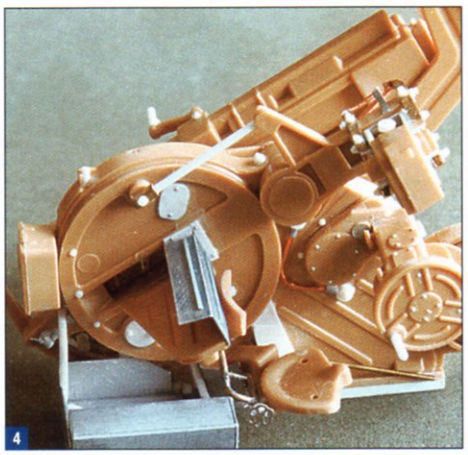
How the linkage from the firing pedals back to the gun was achieved, regrettably, he cannot remember. Similarly, the means by which the turret was traversed remains vague. Again quoting from the Director, he stated that "for side traversing, the traversing mechanism of the 2cm FlaKvierling was used. This was connected to the standard traversing mechanism of the FlaK 43 with a shaft. At the end of the traversing mechanism of the FlaKvierling, a connection by means of a toothed wheel again connected to the toothed turret ring, and in this way the turret was traversed." He stated that this simple solution, when shown to IN6 (Inspekteur der Panzertruppen) in Berlin, caused some embarrassment by its simplicity.

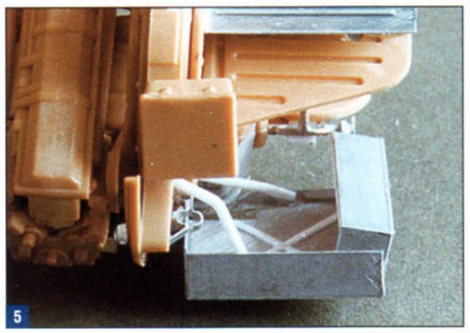
Thomas' model contained a lot of interpretation that has yet to be supported by fact. As much of this detail is hidden, I saw little reason to include it, even if it was based upon factual evidence. Consequently, the major part of the article will concentrate on building the model from known data. It is up to the reader if he also wishes to add

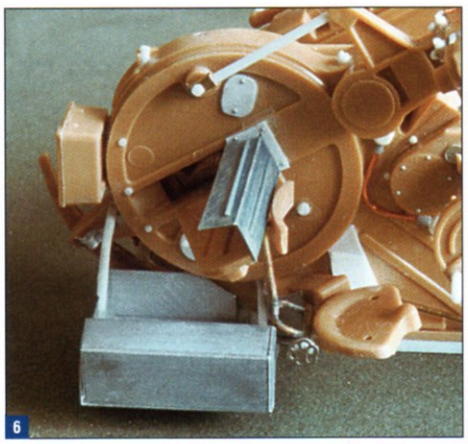


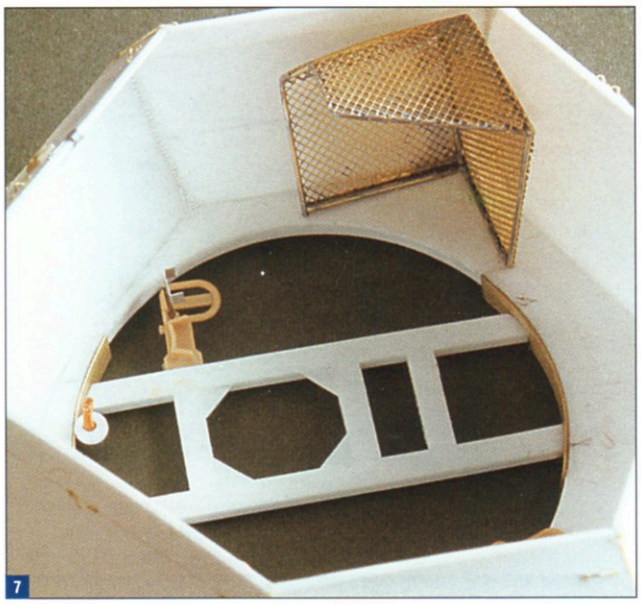




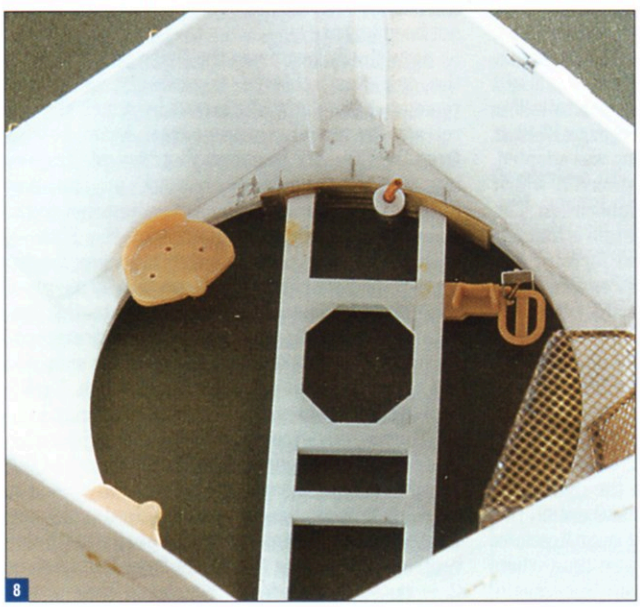








1. The hull top. The Dragon kit has a significant defect in that it is missing the weld seams between the side walls and top hull. I scratch built a replica using the kit's hull as a reference. This worked out well, as it is necessary to relocate the turret ring. 2-6. Various views of the unpainted gun. Much of the detail added was to the sighting device and its mount. Note the parts for the shell ejection mechanism added to the right side of the gun from sheet aluminum. 7-8. The heart of this conversion: the turret. The outside of the structure was formed from 25/1000 plastic cards, beveled towards the top for correct scale thickness. This is my second try, as information on the turret interior was difficult to obtain.



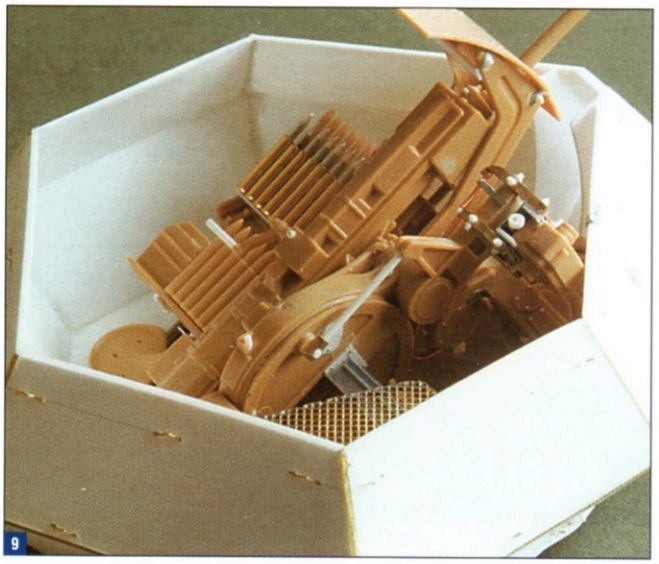
additional detail that the vehicle would certainly have carried. You can be criticized for adding gratuitous detail, however, not for omitting detail that is without confirmation.

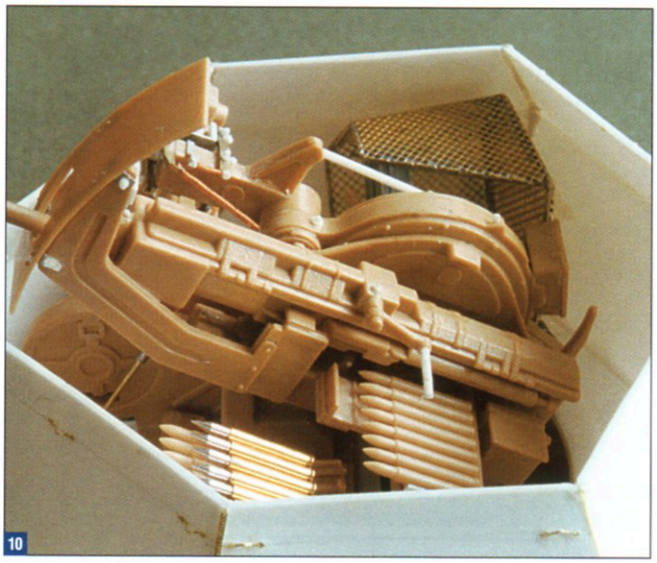
From these brief comments, it should be apparent that there are still many unanswered questions which should preclude any reputable kit manufacturer from releasing this vehicle. Accordingly, it should not be too long before one of them releases it with all its imperfections!

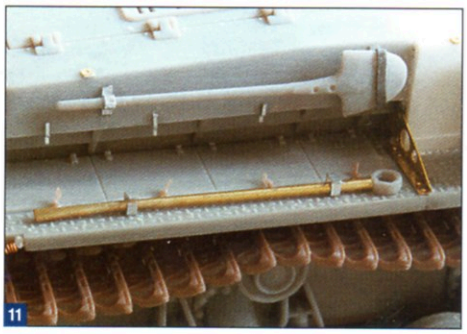
The Model

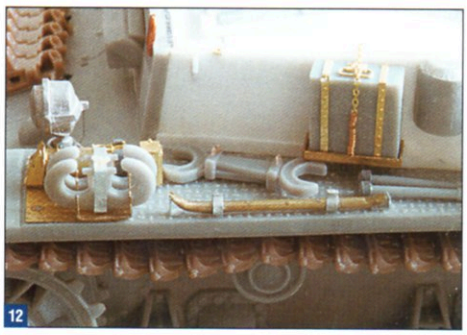
It is true to say that any Pzkfw IV Ausf H to J would suffice as the basis for this vehicle. Vehicles returned from the front would be upgraded and refurbished to include the latest modifications. However, as stated in the preamble, it was the intention to use the latest version of the Ausf J. Accordingly, I had the opportunity to use Tamiya's kit No 181 or Shanghai Dragon's No 6080. Dragon and Tamiya now produce kits of a very high standard, but it is my opinion that Tamiya still has a considerable edge over its Chinese rival. I chose Dragon's purely because it represented the final Ausf J version.

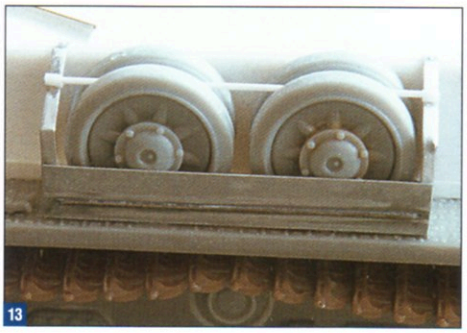
For any modeler thinking of undertaking his first major conversion, I would strongly recommend you attempt this fairly simple project. If you are not too pedantic, you can get away without any major modification to the hull and superstructure. The turret ring will need to be moved forward, as will the right hand side radio operator's hatch. However, the Dragon superstructure has one major imperfection that is difficult to cure, and that I only discovered after constructing the entire hull and running gear. The weld seams between the side wall and hull top were completely missing! I tend to be extremely pedantic about German weld seams and the surface finish to armored sheet plate. The most

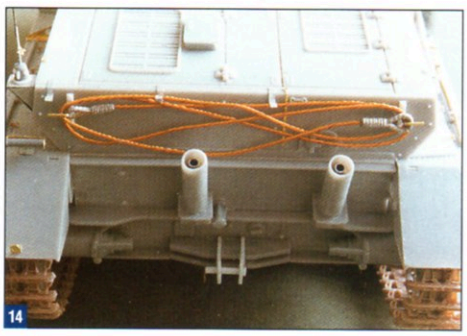


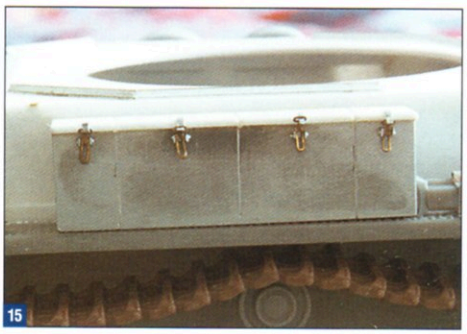


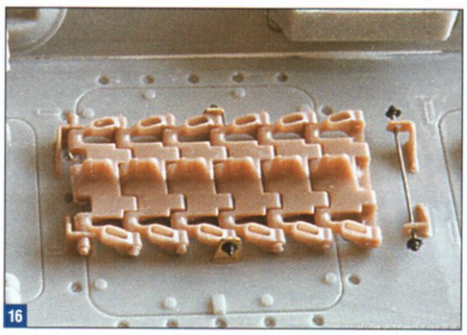












9-10. Due to muddy information regarding the turret, my first attempt could not accommodate the gun! This second version, complete, shows how neatly the weapon fits into the structure. Also visible in these photos are the Aber tie-downs and weld beads. 11. The right rear of the hull. I modified the Dragon shovel slightly and added a completely new brass handle to the track bar. 12. The front left side of the hull shows several added etched and formed brass details. 13. The spare roadwheel container was made from sheet aluminum as described in the text. 14. The rear of the hull. Note the interior muffler pipes added from aluminum tubing. 15. The scratch built stowage container on the right side of the hull, Aber clasps also in evidence. 16. The spare track holder on the hull front was created from ModelKasten and scratch built parts. Both the spare tracks and those on the kit represent the final version of the 40cm track.

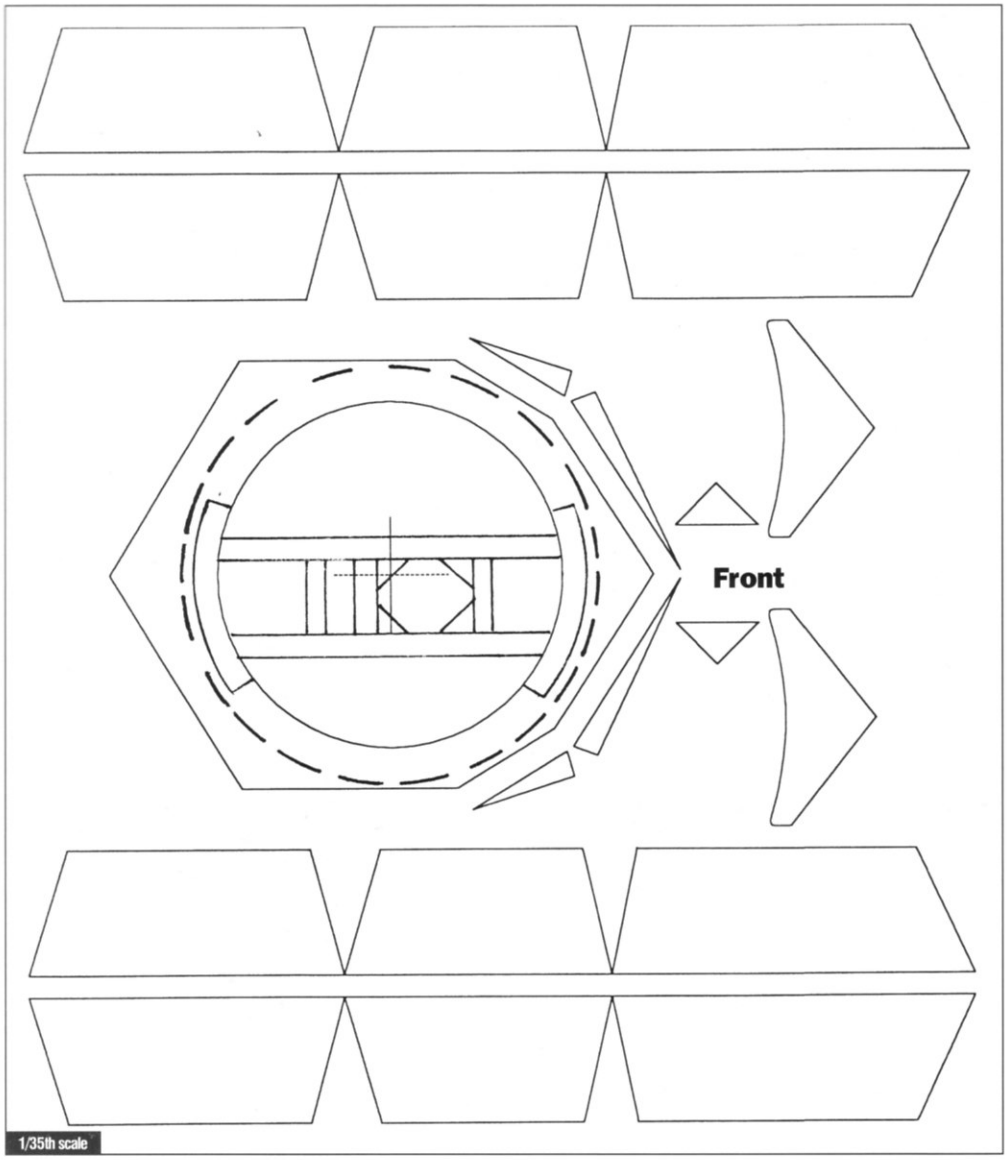
common mistake made by modelers on German armor is the excessive texture given to welds and the ridiculous rough finish to armor plate. German metal technology and quality control ensured both precise weld seams and armor plate with few surface irregularities. Only cast items like the Jagdtiger saukopf could show substantial pits and irregularities. Measurements were taken from the kit's forward hull superstructure as a basis for the scratch built replica. I used 30/1000 plasticard for the hull roof and two layers of 15/1000 card, laminated together, for the sidewalls. The hole for the turret ring was cut before the sidewalls were attached. This turret ring is 46mm in diameter and 49.5 mm measured from the face of the front vertical plate **(see fig. 1)**. On these sidewalls, one piece of card was sanded down to be 0.25mm lower than its partner, then glued together. This produced the recessed weld seam **(see fig. 2)**. The main modeling problem to solve on the hull top concerned the construction of the inverted shallow "V" bullet splash guards. I tired unsuccessfully to bend thin aluminum. In the end I hit upon the technique of using a brass "T" section (1.0x1.0mm). I cut to length and angle before inverting and super gluing in place. I then in-filled with epoxy putty **(see fig. 3)**. I wiped the putty over with a wet flat sable brush before the material set. Once cured, I finished off with fine wet 'n' dry sandpaper.

The two crew hatches were sanded flat on the underside and glued into position. Plastic strips were used for the splash guards.

As can be observed, the rest of the hull is composed of kit parts, with Aber's outstanding detail sets to compliment the kit. I also extensively now use printer's aluminum sheets in lieu of my previous favorite, brass. Finer and more flexible, it is far more versatile than either plastic or brass. Examples are the spare wheel holder on the left side. I used my own archive photos for the detail, and Dragon's for the measurements. All that is required is to draw the complete shape on the aluminum sheet and lightly score with a very sharp knife on the bend lines. Use the knife to cut the shape out and carefully bend to shape. Remember, with aluminum, you only have one chance to bend it correctly. No second chances, or else it just breaks apart!

The Turret

The templates provided are those produced from the actual factory drawings and should be considered totally accurate. They even include penciled modifications by Herr Seherr-Thoss. My first attempt at the turret was a perfect fit, but for scale accuracy I used 15/1000 plasticard. This created a severe problem, within a week or two, as the plasticard contracted. I ended up with a six sided turret with gentle curves to all edges! Immediately after constructing the turret I began on the FlaK. It was only after I completed the basic gun without major

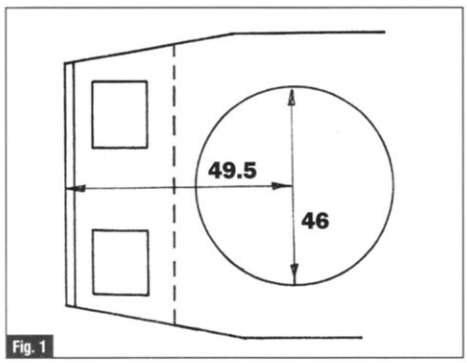


tion of plastic around the perimeter to sand off.

On the base plate, draw a line 0.75mm in from the outer edge all the way round. You will glue the sloping armor to this line. One thing your plasticard side walls will not have is the correct jointing angle. It is not essential to have perfect joint between adjacent pieces. Provided the plastic can be glued together, this is sufficient. Once all six sides are glued, use superglue between the joints, not only to strengthen, but also to seal. After 24 hours, invert the shape and sand with a circular action on wet 'n' dry sandpaper to ensure all the tops of the lower section are flat and level (in theory they should be... in practice...). Repeat with the upper section, including superglue and leveling.

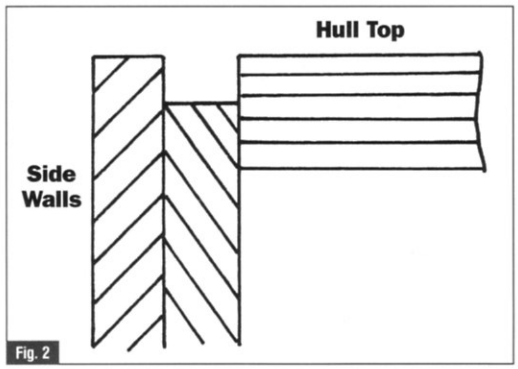
By the way, the superglue I use is an American product called Zap CA Pacer, wonderfully thin with super capillary action. Once more, after 24 hours, I commenced to produce crisp, clean edges to all external angles. I used wet 'n' dry 600 gauge paper. The turret was inverted and sanded on a dead flat surface. The turret was taking to the flat surface, not the other way round. Having gotten nice neat edges, I then sanded them off flat!! They had to have an exact 0.5mm wide ledge to accommodate Aber's superb etched weld seams (R06). The genius of Waclaw Peszko's idiosyncratic ideas is only fully appreciated in these situations!

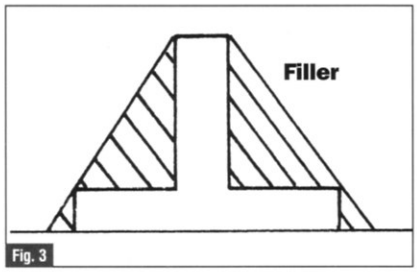
Tie cleats (35A59) were also super glued into position. The two longitudinal beams were installed, together with their cross braces (see template and fig 4). A 1mm thick washer of plastic should be cut out and glued to the underside of the turret base. Using 1mm plastic card and a compass cutter, I cut out the washer. The outer diameter is 55mm and the inner 46 mm (remember to cut the outer ring first!). This should fit exactly over the hole in the turret base



detailing did I discover that the gun wouldn't fit into the turret! The firing pedals just completely obstructed the installation. This shrinkage and the problem with the gun caused a severe delay, whilst inquiries were made to the real experts like Hilary Doyle, Detlev Terlisten and Herr Seherr-Thoss.

After some considerable use of the e-mail, things are a little clearer, but still very muddy! I decided that the first turret, whilst accurate in measurement, was not of a suitable quality. I remade it in a very short time, this time with 25/1000 card, beveled towards the top for correct scale thickness. All the templates were cut out in one go. The simplest way is to place the paper on the plasticard and use a fine compass point to pierce the paper and plastic. Using two set squares running on each other to draw (parallel lines) the outline before cutting. If you do not feel 100% confident, leave a frac-



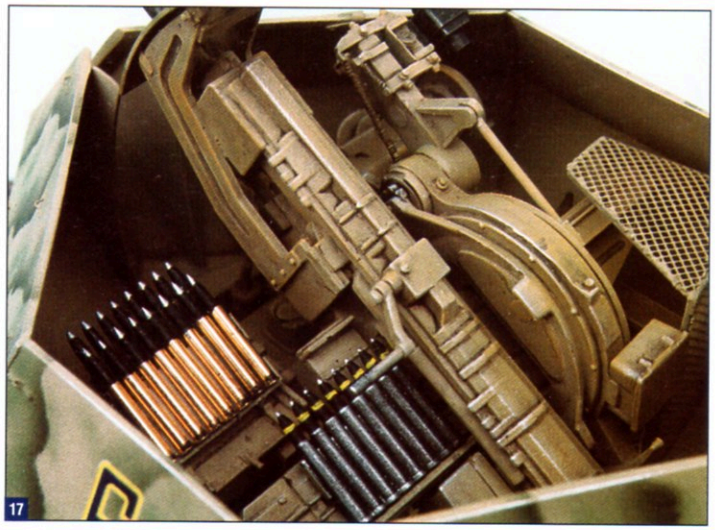


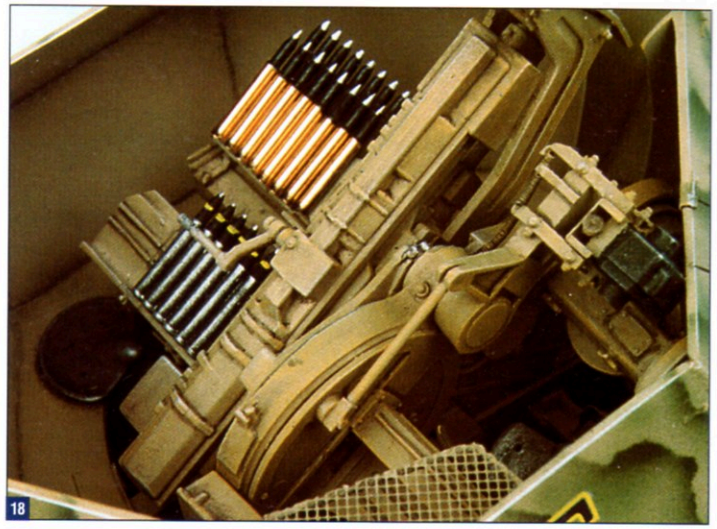
The 3.7cm FlaK 43

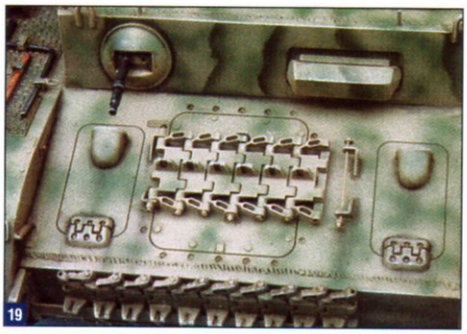
At the time, (summer '99) Italeri was the first to produce this gun. Since then, Tamiya has followed up with its Mobelwagen, which of course includes this armament. It will come as no surprise that Tamiya's effort is superior to Italeri's in several ways, mostly detail.

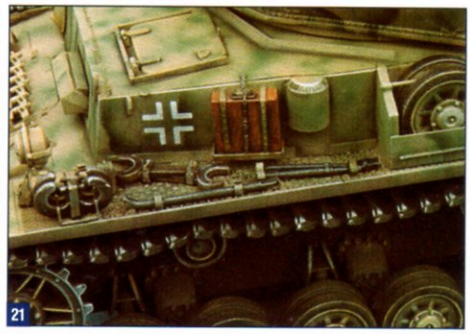
However, the Japanese only faithfully reproduce what they see and not what the actual gun had. The examples Tamiya used obviously had detail missing, as even this superior model needs work to bring it up to scratch (see photos). Readers will observe the actual brass used in the spare clips holder. Regrettably, many will never be able to obtain these pins, which are used by the computer industry to check that circuit boards are correct. These pins come in varying sizes (all caliber's I like to think!) and are titled checker pins. They were cut to length, which, as a by-product, produces very small springs. The contact pin is reversed and a perfect shell produced.

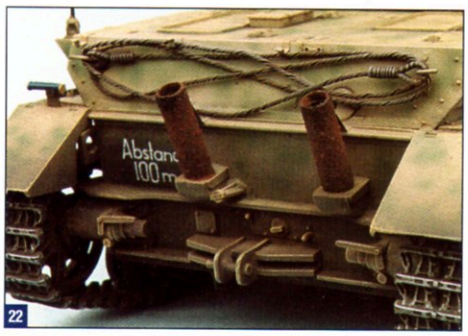
From the photos, you can observe that most effort went into the sighting device mount, which in both models is poorly detailed. Once the gun was completed, I experienced the usual problem of deciding what detail to include in the turret. Thomas' includes a substantial amount that there is no factual proof for. Equally, he has a valid point to say that it had a radio, 1,000 spare rounds etc., etc. and this had to be somewhere within the tank. My maxims these days are don't install unless you have proof. This ended the construction phase and as I moved to the finishing stage, I had three separate components, the hull, turret and gun.











The completed model painted in Tamiya colors. 17, 18. Close-ups of the finished turret and gun. The brass shells in the top tray are pins used in the computer industry to check that circuit boards are correct. 19-22. Various views of the completed and painted model. The camouflage, although usual, is documented by wartime photos. Technically, the overall scheme should be a late war one of dark green with red brown and dark yellow applied in sharp contours, but I opted for the standard dark yellow base instead. 23. This is the turret bulge that is such a significant identifying feature of the Ostwind.

Painting

For the purist, the vehicle should have been painted with a base coat of Dunkelgruen RAL 6003 and camouflaged with shape contours of Rotbraun RAL 8017 and Dunkelgelb RAL 7028. However, this limits my personal choice and provided that I use standard German colors, then this is acceptable to me. Consequently, the model is sprayed with dark yellow and a light green pattern with darker, loose stripes.

The first procedure is to prime the model (after masking the brass ammo) in one single color. For this, I used light gray automotive acrylic car primer. As described in previous articles, this is a superb base for acrylic top coats. It produces a beautiful, smooth, stain finish that also shrinks around the detail. This is allowed to cure for 24 hours. I added 25% (approximately) of flat white to Tamiya dark yellow XF-60. I then added (all in one session) 50% JN Green XF-11 to the dark yellow. Gentle soft whirls and patterns were then sprayed on the model. I then randomly tore an edge along a short section of newspaper. Using straight XF-11 and holding the paper against the turret, I sprayed to the edge of the paper. This produced the sharp-edged pattern to one side of the line and the diffused edge to the other (I do have WWII photographic proof of this type of camouflage).

The following day, I applied a wash of enamel thinners with 20% sepia extra oil paints. This was only applied uniformly to the mudguards, elsewhere a 00 paint brush allowed accurate positioning into recesses. I dry brushed in the usual manner and applied chalk pastels to recesses and bases of detail. Wooden handles were painted in the acrylic dark yellow. Once dry, a thinned wash of burnt sienna oils was applied. After drying, wood grain was painted with neat burnt sienna. The whole of the sub-structure, including the wheels and tracks, was sprayed with Humbrol's matte earth and 30% matte black. The following day, in one session, I dry brushed, starting with the dark earth, graduating to the dark yellow. Running surfaces of the tracks, drive sprocket teeth, rear idler and top return rollers were dry brushed with Hannant's Oily steel X503.

Using Tamiya's superb Paint Marker X-11 chrome silver, I sparingly dry brushed only the extreme edges of all metallic surfaces, from tools to tracks. I used the last of my old dry prints and eagerly await the use of Archer prints on my next model.

This model has been so much a joint effort, that I must thank the following who assisted so much, especially Donny Campbell and Detlev Teristen. Also, Hilary Doyle, Tom Jentz and Thomas Anderson.

—A.J. Greenland

MMiR RECCE

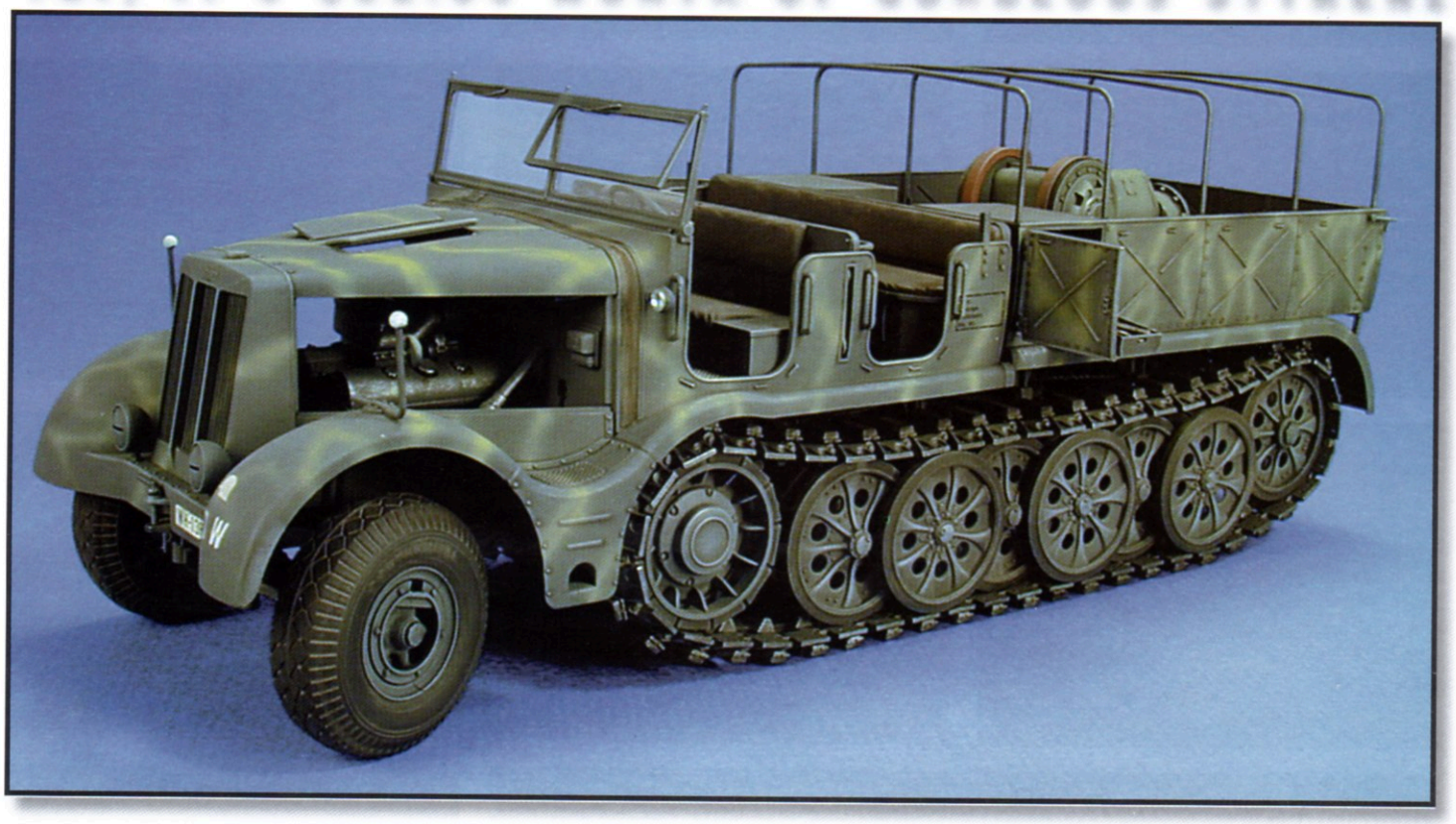
Shanghai Dragon Pzkfw IV Ausf J. Kit number 6022. Suggested U.S. retail price $19.98.
Testor/Italeri FlaK 43 German AA Gun. Kit number 0363. Suggested U.S. retail price $15.00
Aber Narrow Weld Lines. Kit number 35R06. Suggested U.S. retail price $5.95.
Aber Tie cleats. Kit number 35A59. Suggested U.S. retail price $9.99.

References

Panzer Tracks Number 12 FlaK Selbstfahrlafetten and FlaKpanzer published by Darlington Publications.
Duske/Greenland Photographic Archive

Fabulous Famo

YEP, IT'S $82.00 WORTH OF GORGEOUS STYRENE



The Germans loved their halftracks. They made a whole bunch of them. You got your 3-ton, your 5-ton, your 8-ton, your 12-ton and your 18-ton. These designations denoted their towing capacity and not their actual weight. Clearly, the pride of the bunch was the FAMO 18-ton. It was designed to tow and recover tanks. For this purpose, it was equipped with a large horizontal winch (rather unique among recovery vehicles) and it could also be used in conjunction with a thing called the Sd.Ah 116, which is German for "big-ass trailer."

Although the winch was used for pulling and yanking, towing was accomplished much like our friend, the Dragon Wagon, with a conventional hinged draw-bar.

At the time it was designed (1939), the FAMO was state-of-the-art and it could haul the odd StuG, Panzer III or Panzer IV with ease. However, someone forgot to tell the designers that German tanks were going to get really, really big. As a result, it took three of these enormous machines to pluck a Tiger or a Panther from the field.

But enough of all that, what you really want to know about is that $82.00 model. Right?

And so...

My first impression upon opening the box of the FAMO was simply, "why doesn't Tamiya just do everything?" I mean, their approach is so expert and so thorough, why do we ever have to build another kit by someone else? A guy can dream can't he?

The model comes with the usual "blow you away" artwork on the cover and the first thing that caught my eye inside the box was the substantial 20-page instruction booklet. This put me in the mind of the Dragon Wagon, as it includes detailed drawings of how to recover an unlucky panzer, as well as other tantalizing details. Some of those are line drawings of that Sd.Ah 116 trailer hooked up and the FAMO version with the 6-ton crane. Can we Tamiya-san? Can we? Pulleeezzze? (Insert more dreaming here)

The kit is molded in that attractive orangey styrene and there are rubber tires in the box and three darker colored sprues to make up the link-to-link tracks.

Construction starts with the lovely little Maybach HL108 engine and Tamiya has thoughtfully provided wooden blocks for me to display this as a stand-alone item, if I so desired. I wonder if your kit will have these, too?

Digressing for a moment; this engine is the same one found in all the Panzer IIIs and the StuGs. This immediately makes me think the following:

A) It's great no matter what and I love it

B) It should be released separately right now

C) Who invented liquid soap and why?

Both the StuG and the Panzer III from Tamiya have separate engine hatches, so...

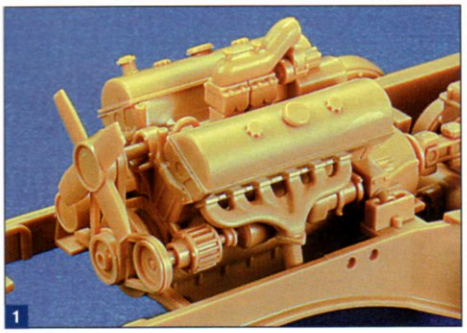
Meanwhile back at the model, the frame is a large single piece shamelessly flaunting Tamiya's molding technology. All the various suspension components get added to it and you will have to watch those torsion arms, as they have a bit of play in them. All in a straight line, please. A transmission to equal that Maybach gets installed at this stage, too.

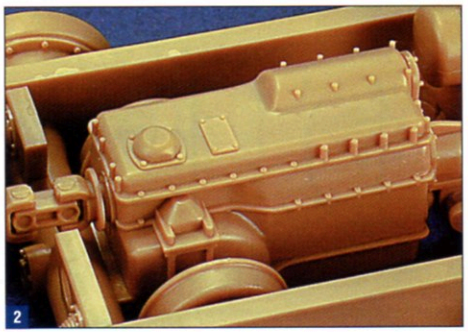
There are approximately 987 wheel parts to add and keeping them all identified can be difficult. I left most of them on their sprues until I was ready to stick them together. Another word of caution, most of the inner wheel surfaces are visible after assembly. Even those that are barely obvious stand out due to the color of the plastic. A bit of pre-painting will be in order. Black worked for me.

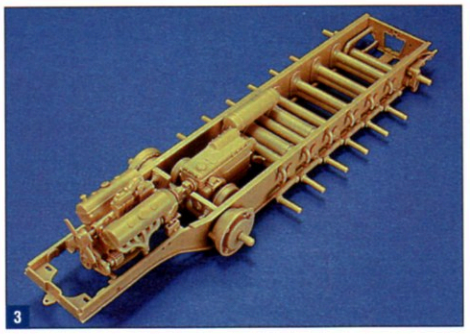
The drive sprockets are specifically left and right, so keep an eye on those, too.

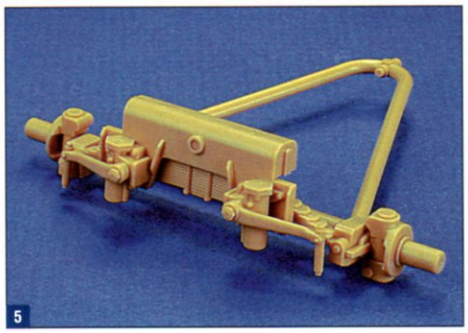
The front suspension is designed to work. Normally, I'd glue all this together, but it came in very handy later when painting. Real rubber tires are supplied like those supplied in the Dragon Wagon. You either love these or you hate them. Some like to bitch about that pesky center seam, but I dig them because they are so easy to weather. The tread and manufacturer's marks are spot-on. I also dig them because they come on and off easily, which is great for painting.

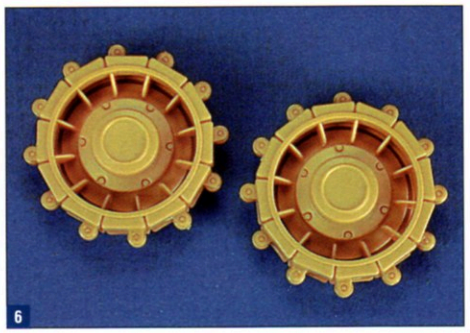
The rear coupler assembly is a phenomenal piece of modeling engineering. It's composed of ten pieces, one of which looks like it's already been assembled from four or five parts! You'll want to stop and stare for a moment.

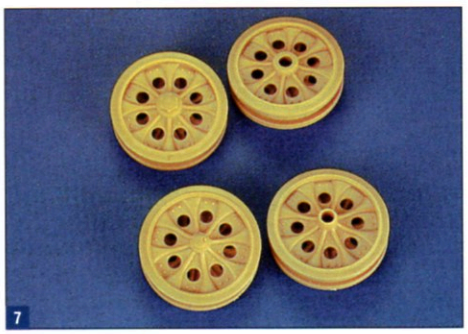


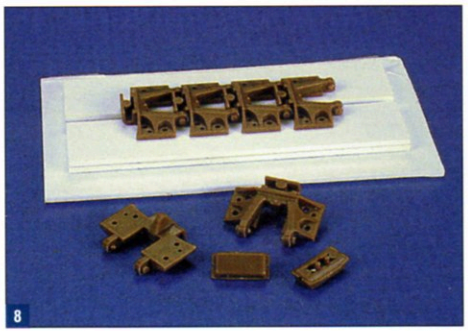


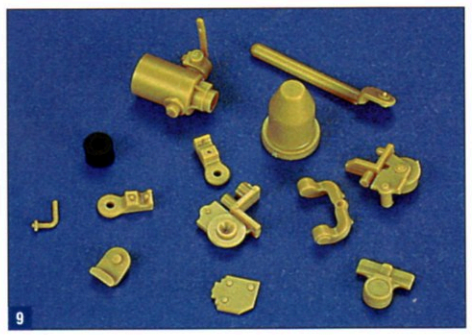


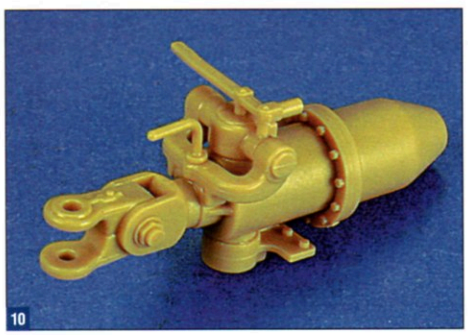


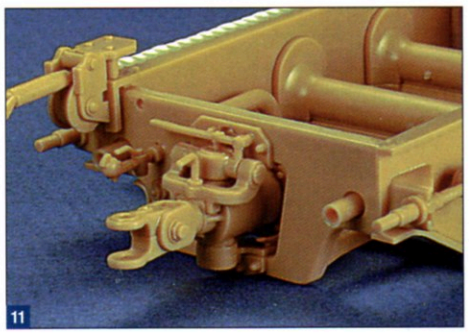


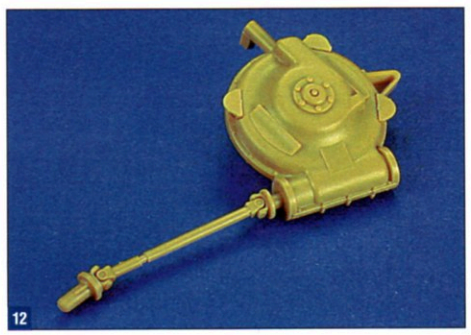


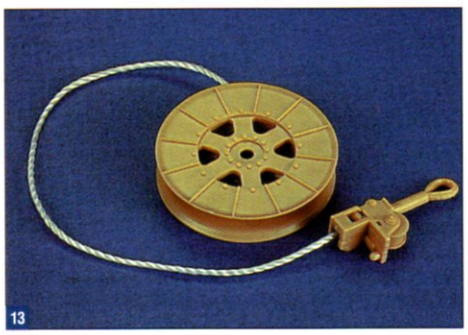


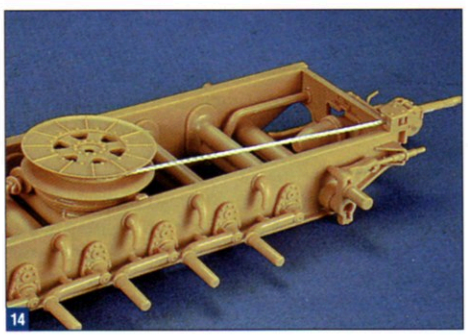


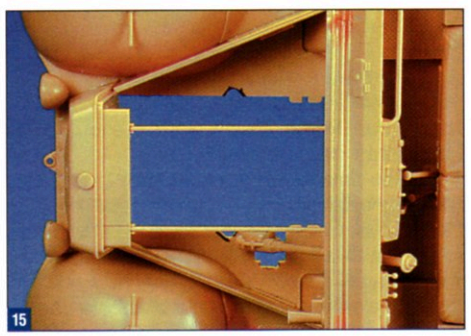




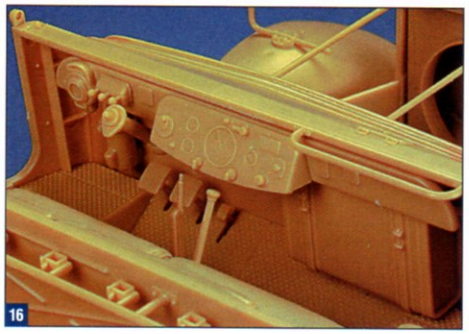


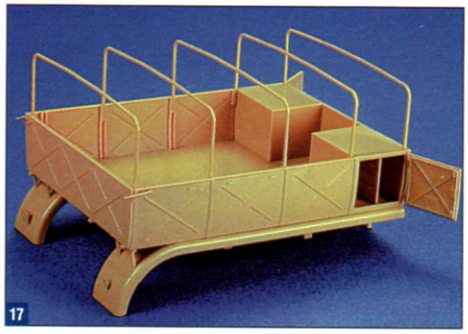


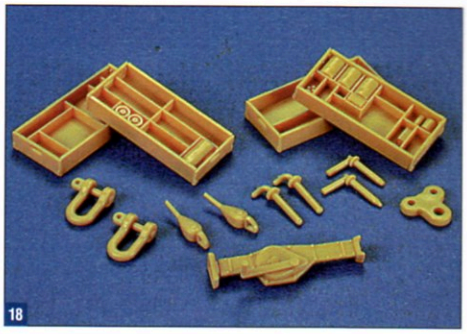




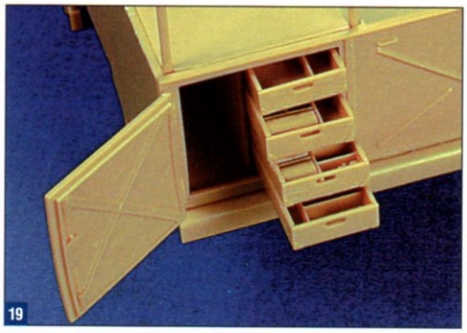
1. It's a little gem. The Maybach HL108. This is the same engine in the Panzer III series of vehicles. 2. Here's the tranny to go with it. 3. The finished frame. At this point, you know it's going to be big! 4. The wheels and the real rubber tires. 5. The front suspension. It can remain workable. 6. The drive sprockets. Be careful, there is a left and a right. 7. The four types of roadwheels. Also watch the ID's here. 8. The tracks. Shown are the separate links and pads, plus my quickie jig. 9. The many parts that make up the elaborate rear coupler assembly. 10. The impressive result. 11. This is the completed rear frame with the cable roller and the coupler installed. 12. This is the terrific looking winch motor. This is, unfortunately, completely hidden after assembly. 13. The winch cable needs to be threaded through the rear roller before adding the two parts to the chassis. 14. Here's how it looks on the model. 15. I cut three notches into the front coach work so that it would clear the frame. This allowed me to lift it off for painting. The two notches for the exhausts are about dead center in the photo and the third is just to the right of center and just below the lower radiator stabilizer bar.

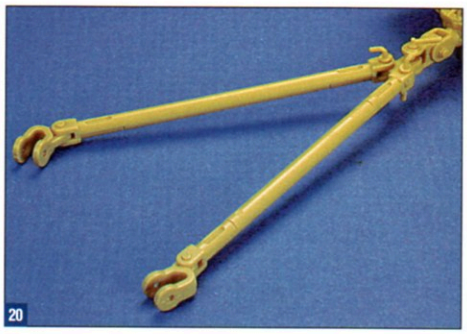


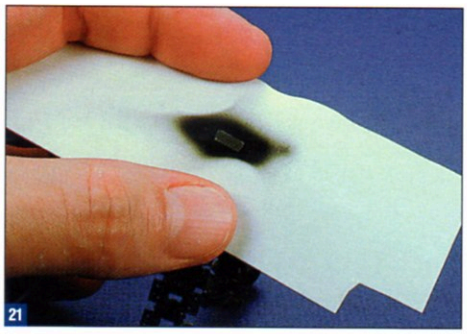


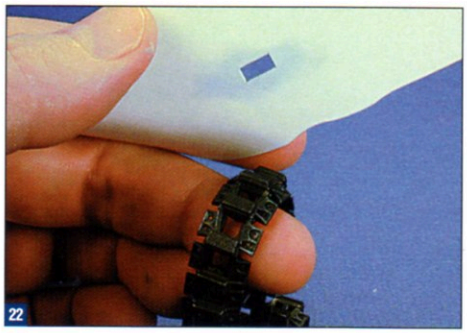


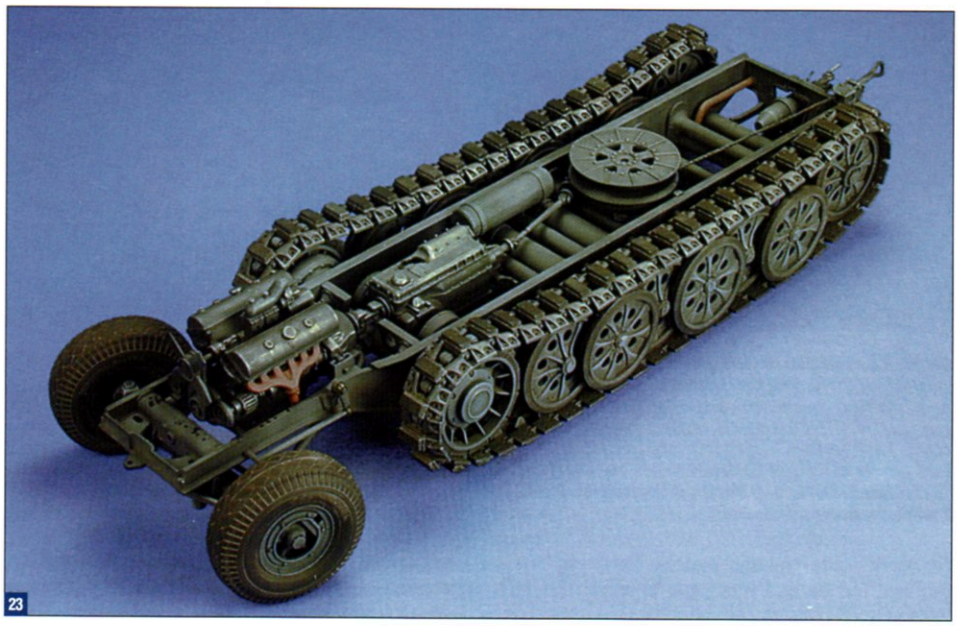
16. Tamiya packed a ton of detail into the dash board area. Everything is where it's supposed to be. 17. This is the completed rear bed. I left it off until the vehicle was completely painted and weathered. I also left the stowage lockers open. 18. These are a few of the accessories provided to dress up the lockers. Two of the drawers have small parts molded in. 19. This is how one of the lockers can be configured. There are slots in each locker for four drawers. 20. The finished draw bar. 21, 22. This is the method I used to paint the track pads. It seemed a bit quicker and neater than hand painting. 23. Painting and constructing the upper coach work separately allowed me to display the chassis like this.











Back on tracks

Somewhat unusually for Tamiya, a full set of link-to-link tracks is provided. There's no way to avoid it, really, as the complex pad and link design of German halftracks would have made it difficult to accurately reproduce these in vinyl—especially considering the FAMOs giant shoe size.

Be prepared to kill some time on these babies, as you'll need to remove and clean-up 47 links and shoes for each side. I slapped together a quickie jig using the pre-scored Evergreen sheets designed for floor-tiles. I used the jig to remove the links and also to hold them steady while gluing them. I'm surprised that Tamiya doesn't provide something like this in the kit. It's extremely fiddly to build these without it.

You'll have to look very closely at the instructions to see that the two small pips on the bottom of each track pad go towards the rear of the track run. Gluing them in presented a bit of a challenge, too. I finally settled on dipping each of the pads in a small puddle of superglue, then pressing them into the links. Using this method ensured that they would remain workable. Even if you hate workable tracks, I highly recommend this. The 47 links is perfect to make a nice even run and still lay down on the suspension. They do tolerate a fair amount of handling. Beware that the tracks will not fit if they are installed backwards. The front of the links (the side that receives the pad) should all face the front of the vehicle.

Put me in (the) coach

The coach-work all built up well. Tamiya has designed two distinct units for the top of the FAMO, one being the engine and driver's compartment and the other being the cargo bay. This would make it really easy to make that crane variant, but I won't say that here...

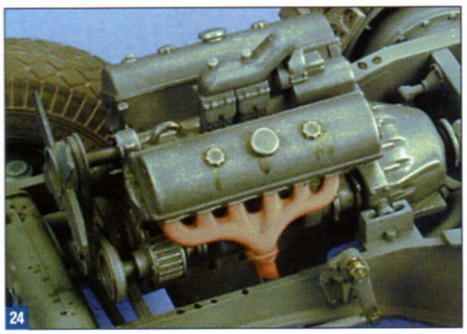
There is one option on the front end. This is the addition of a large tube bumper. This is a later production feature and it broadens the historical context of your model. The very late versions of the FAMO had very high and cut back front fenders (they were prone to jam with mud) along with this tube bumper.

Both subassemblies end up looking super sweet. There are plenty of attractive details throughout both. The dash-board being the most detailed.

In order to properly paint all the detail on the under carriage, I decided to see if it was possible to construct the front coach work as a single assembly (the rear already is). Tamiya would have you add the front fenders first, the side cowlings, then the driver's compartment. However, this will deny you free and easy access to the engine and the undercarriage.

The only thing that hangs this up is the exhaust pipes on the engine and the bottom of the steering gear. After studying this for a while, it occurred to me that a few well-placed notches would allow the front end to clear. Once this was done, I assembled the front end on the chassis to keep everything straight. The only areas that need adhesive are the parts that connect the front fenders to the main cabin.

The only flaw with this method is that the hood is designed to bring all these components into line and if you leave if off, or unglued, it throws off the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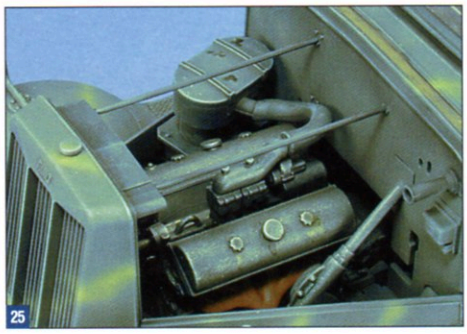
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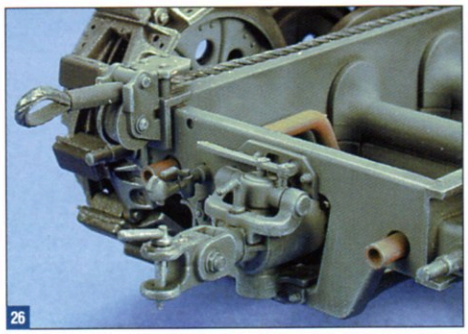
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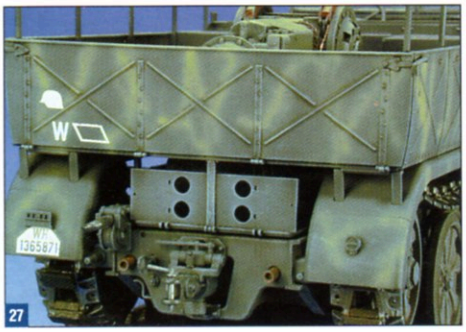

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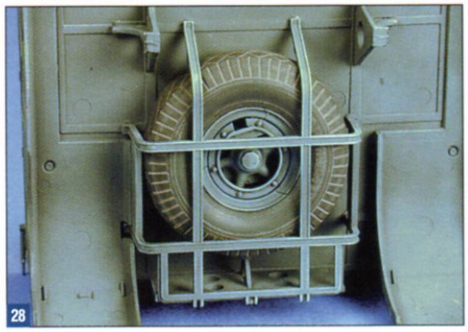
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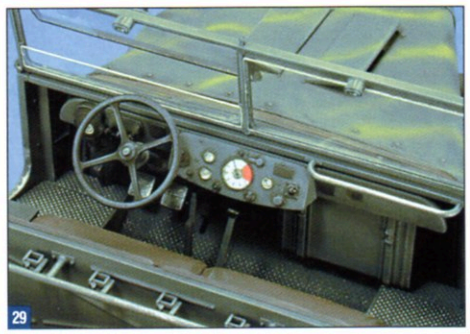
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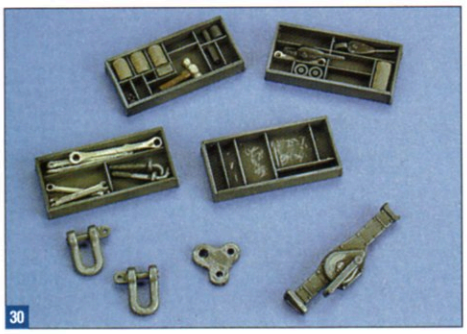
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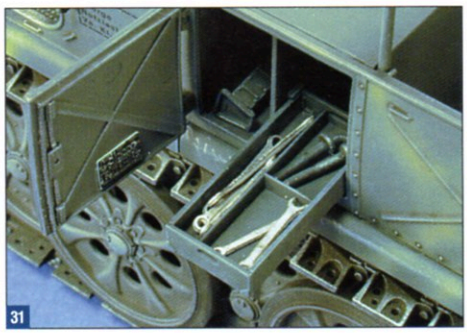
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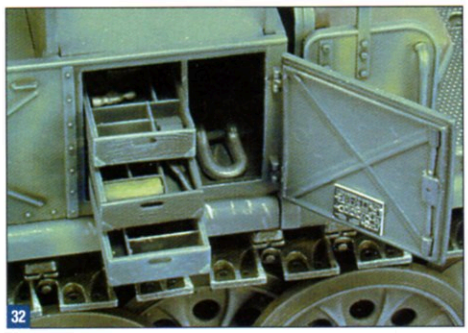
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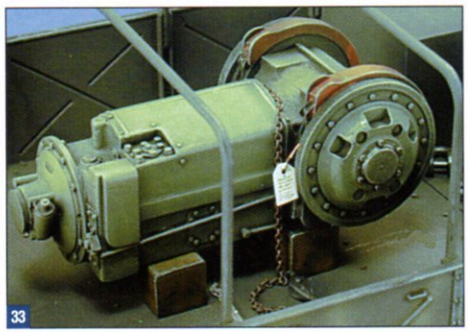
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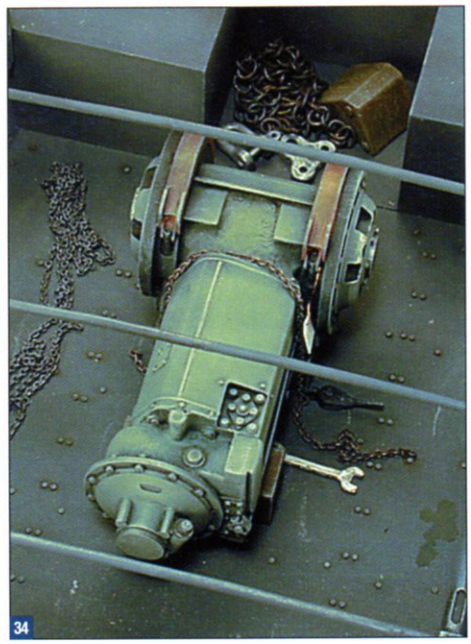
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24, 25. The completed and painted engine. Photo 25 shows the air cleaner, which was painted and weathered separately. The fit was good enough to leave it unglued. 26, 27. The completed back end. 28. The neat looking spare tire rack. Also invisible when complete. 29. The finished dash board. Don't forget the red line! 30. Here's how all those drawer goodies ended up. I added a few 1/25th scale white metal auto tools. They seemed appropriately tank-like. 31, 32. I opted to added three of the drawers to one locker and one to the other in order to see the stuff inside better. Note the placard decal on the doors. 33. This is the Tank Workshop Panther tranny, thrown in for the heck of it. 34. The back bed got a few chains, tools and some oil stains.

fit or the side cowling panels. This was not a problem for me, as I was going to leave these off, but the hood rests on the coach-work with a slight gap. I shimmed mine with styrene strip.

A small amount of filler was needed in the area to the rear of the fenders. This may have been due to my funky modifications. Regardless, filler will be needed to properly fill the seams that cross the flexible canvas gasket at the rear of the engine compartment.

Another consideration for painting is the rear underneath mounted spare tire. You can either leave off its small door or leave the sub-assembly off until after painting as I did.

I opted to install the canvas frame bows up, but they are super delicate. Fortunately, they are easy to fix.

Accessorizing is important

There's a good amount of little accessory items in this kit. Not quite what you get in the Dragon Wagon, but I was happy. Tamiya concentrates on the side stowage lockers and gives us four drawers, two of which already have small parts molded in. The instructions illustrate how these should look when fully packed, but none of the parts shown are included. Two oil cans, a jack and a few tow shackles are present.

The main towing drawing bar is a complex subassembly and it can be assembled so that it will remain workable, in case you want to show it in use.

There is a veritable crowd of figures provided in the kit, eight in all. They are cleverly based on three basic figures, all with different arm and head combinations.

Yes, I did

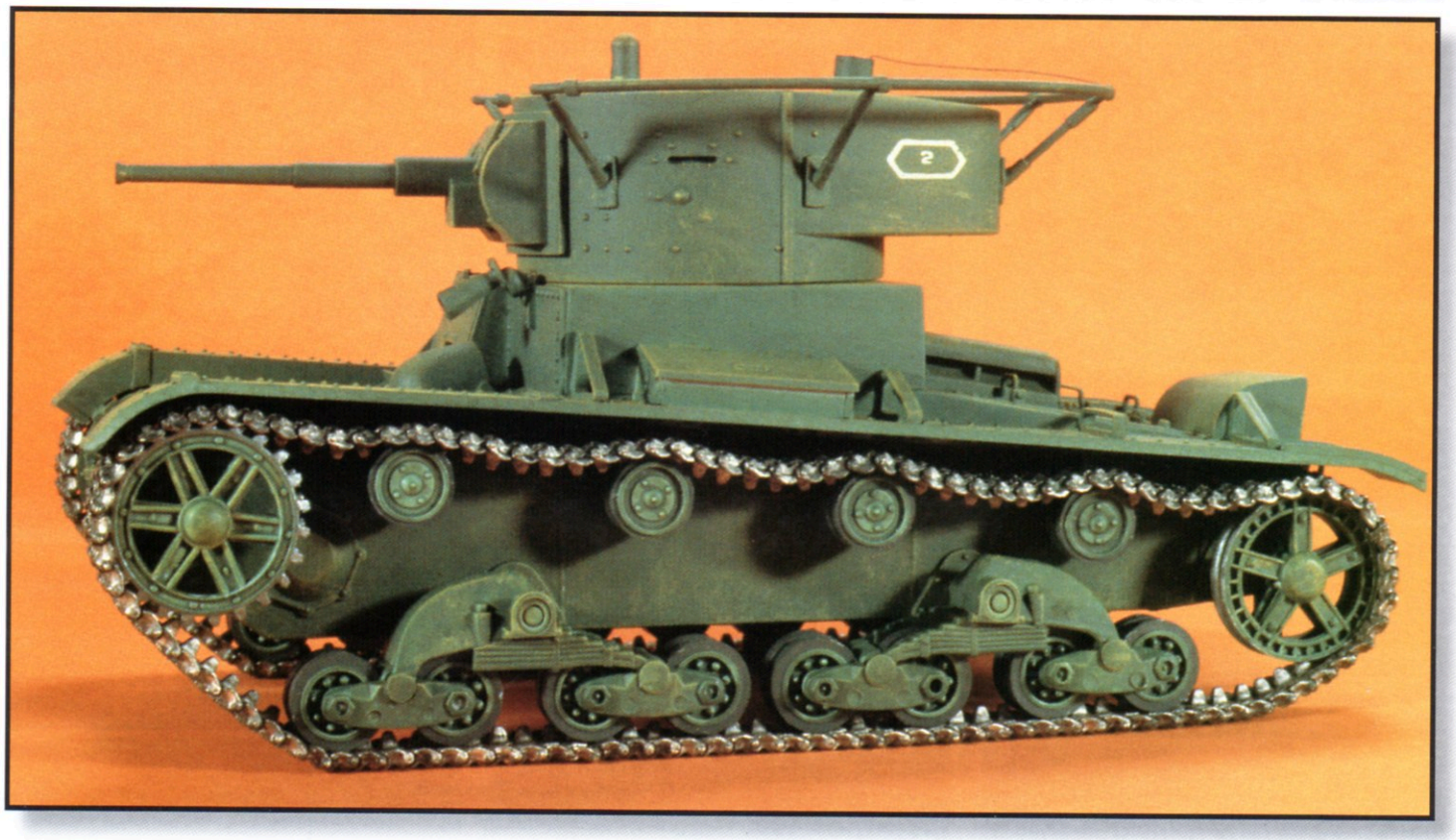
I did finally paint the model. When the dust settled from assembly, I wound up with six subassemblies, the chassis, the two track runs, the front cabin, the rear cargo bed and the engine air cleaner (it was the one thing that wouldn't fit in there). I kept everything apart right through painting, weathering and drybrushing.

I started by priming everything in black. I sprayed Tamiya colors throughout and the black is XF-1 (detail painting is all Vallejo). I went for a transitional 1943 scheme of dark gray with yellow overspray. My base coat was XF-63 and the dark yellow bands are XF-60, dulled down with a little Buff, XF-57.

continued on page 56

T-26 Redeux

IT'S T-26 ALL OVER AGAIN, THIS TIME WITH A LITTLE BIT OF ZVESDA



Photographs: Joe Morgan

This is not, I repeat, not, the Spojnia/Mirage 7TP kit! You heard me, no usunacing to do on this baby; you can just start right out with a real T-26 kit. And it's a very nice kit indeed, another cooperative venture between Italeri and their Russian partner, Zvezda.

You'll need to pay close attention to your references (or this article), though. There are at least two glaring errors in the instructions that will lead the unwary astray. The first of these concerns the bogies, and the second the gun mantlet; I'll address these in the appropriate place. To do a good job, you'll also need some aftermarket parts, but then don't you always?

Construction

Beginning with the running gear, I found the quality and detail of this offering to be far superior to the earlier vintage Polish kit. The wheels are detailed nicely and construction of the bogies far easier. Step 1D would have you insert pins through the assemblies and mushroom them with a hot screwdriver (has anybody ever really done this? not me!); the pins aren't long enough for this.

Step 2 concerns the idler, drive sprocket, and tracks. Here is the first of the aftermarket parts; I used Friulmodellismo tracks on the green tank, and workable ModelKasten on the white one.

The drive sprocket will require some minor sanding to accommodate the Friul tracks; the ModelKasten fit as is. The kit tracks were stiff and almost devoid of detail, especially compared to the aftermarket stuff.

Step 3 has the assembly of the hull and running gear and the first of the errors. The hull, in the Eastern European fashion, is made of separate plates, but there are adequate locating rectangles to make this less of a pain than most. The bottom of the hull is completely detailed, in contrast to the Spojnia kit, and the idler mount is very nicely detailed as well.

Where these guys screwed up is in the bogies. The plans show them placed in line, when they are supposed to be opposed. The big castings go next to the drive sprocket and idler, with the spring detail pointing to the middle. I could find no photos of any of these tanks (Vickers 6-ton, 7TP, or T-26) with the bogies in line, so I don't know where these guys got this, but they even screwed up the box art!

Upper Hull

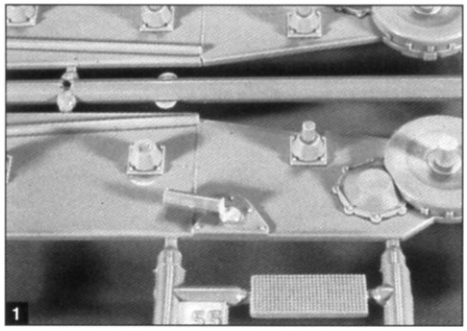
All went well here, with only one minor glitch. The left side of the hull is shown getting two braces from fender to superstructure while the right side only gets one. This is incorrect; both sides get two. I suggest using 24C as the missing brace on the right side, and use one from your spares or make one as the brace from fender to air outlet box. Speaking of the air outlet, I put a piece of brass screen in here, instead of the kit's not very clean plastic part.

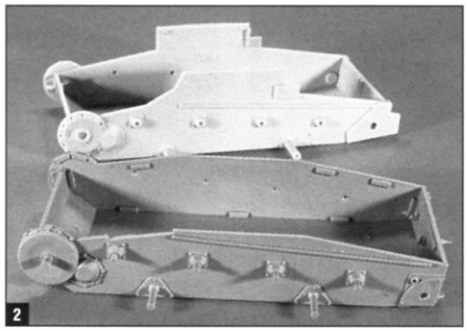
I didn't like the light (parts 56B, 42B, 41B) and I didn't have an MV lens to fit, so I folded the thing down on the green one. On the white one, I painted the inside 42B Polly S bright silver, then filled it with Maxi-Cure gel super glue; this produced an acceptable lens. The plans don't mention this at all, but most of the time these were down, I suppose to protect them. The tools are very crudely cast, so heavy that I found them to be unusable. The ones I used on the white tank were from the AER T-28 kit, the only worthwhile parts I've found from that kit. (I wish somebody would make a nice set of Russian tank tools. Tamiya, are you listening?) The only stowage I have on the green one are the two boxes and some spare track; the white one doesn't even have the boxes. Not all T-26s had 'em.

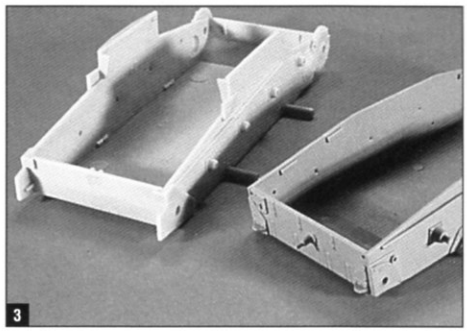
Turret

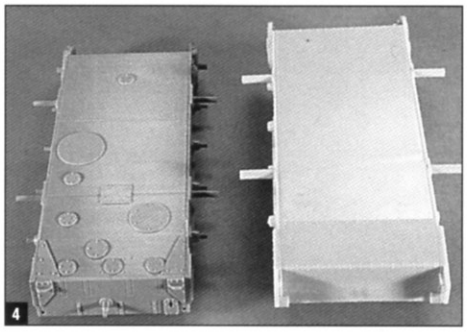
This comes from the Zvezda BT-5 kit, and is fairly nice. It needs more work than some, but the shape is correct, anyway. The glaring error here is in the mantlet (part 11A); it's shown in step 8M upside down! If you build it like the plans, first it won't fit the turret, and secondly, the gun would not be able to be depressed past the horizontal. Another bonehead mistake.

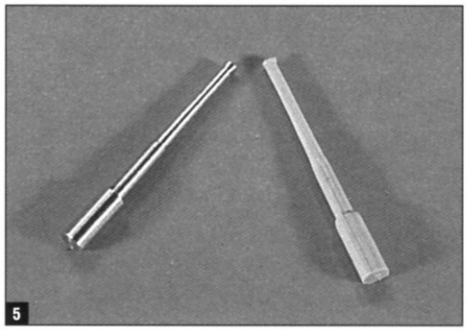
The gun barrel is so poorly cast as to be unusable. Jordi Rubio makes a barrel for the tanks, but I just had a machinist here in town make me a couple out of brass.

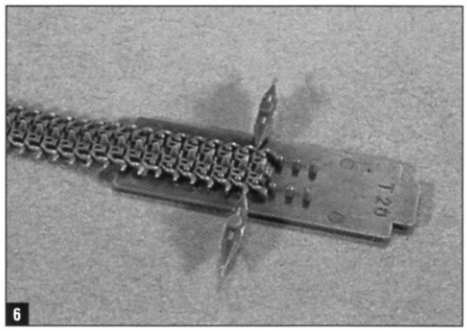


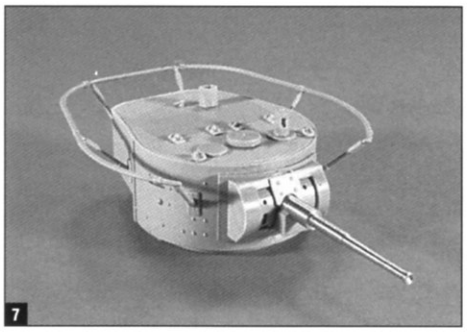


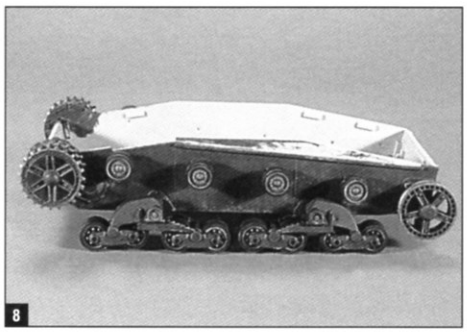


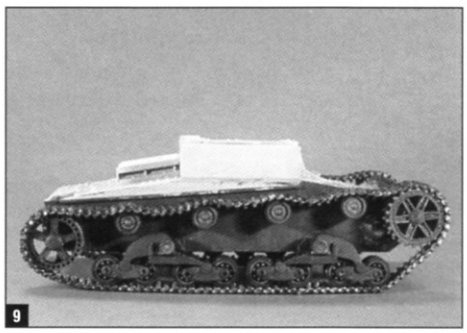


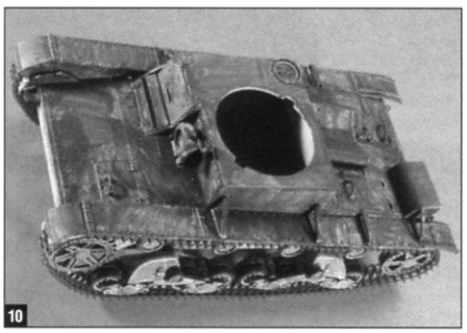


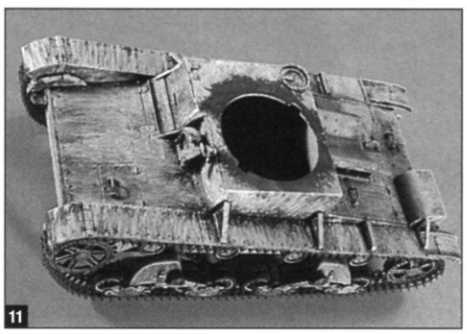


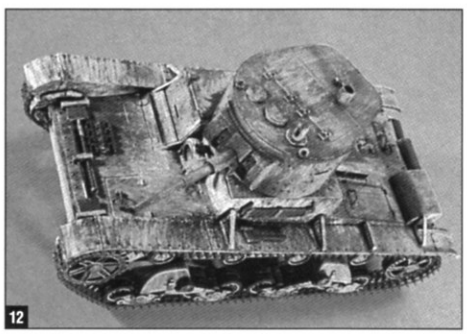












1. A broken bogie mount; seems like the price to pay for an Eastern European kit. 2. In the foreground is the Italeri kit lower hull; in the background is the Mirage/Spojnia one. The Italeri one is vastly superior, 'cause it's a T-26, not a 7TP! 3. The rear of the two hulls, the Italeri on the right. Notice the better detailing on the Italian kit. 4. The bottom of the two hulls. Notice the Italeri is fully detailed, while the Polish one is featureless. 5. Some parts were just flat unusable, like the tools and, shown here, the gun barrel. I had the replacements made here in Daytona; no shortage of machinists, with all the bikers and racers! 6. Here's the ModelKasten tracks under construction on the provided jig. There's an inside and outside pin on each of the sprues, so you glue one side, cut it off, turn it around and glue it on the other side. 7. The completed turret for the green tank; this is the turret from the Zvezda BT-5, and not a bad one. The antenna mounts need a little work, though. 8. Lower hull with suspension components installed; the detailing is much better. Also note proper bogie placement, in contrast with the kit instructions. 9. Here's the unfinished hull with the Friul track installed. This track is just the best! 10. The upper hull with a crude, brushed coat of dark green. Just make sure here that all the nooks and crannies get the green. 11. Upper hull with a coat of 'whitewash', actually Pactra camouflage gray. Remember this stuff was applied by brush, mop, rags, or even sometimes by hand, so it doesn't need to be very good; indeed, it shouldn't be! 12. The 'whitewash' has been drybrushed with the base dark green. Notice the drybrushing is especially heavy in high wear areas, like the glacis in front of the driver's hatch.

The antenna supports (parts 16A) at the front and rear of the turret must be shaped with a round file to fit the (rounded) contour of the turret. The antenna itself is flexible enough to make attaching it to the supports easier than it looks, but don't forget to run some fine wire from the round protrusion on the turret rear to the antenna. I didn't use the antenna on the white one.

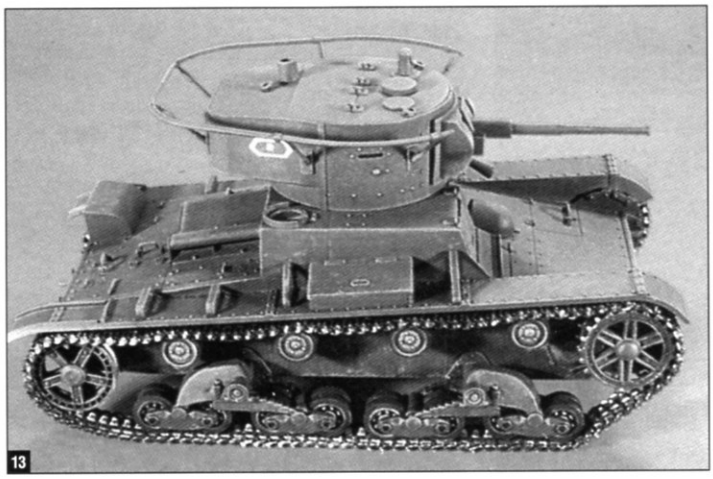
The rounded thingie on the front of the turret roof is the periscope. It needs a slot cut in it. Some putty is also needed around the roof seam. No matter how you put it together, you'll have a gap.

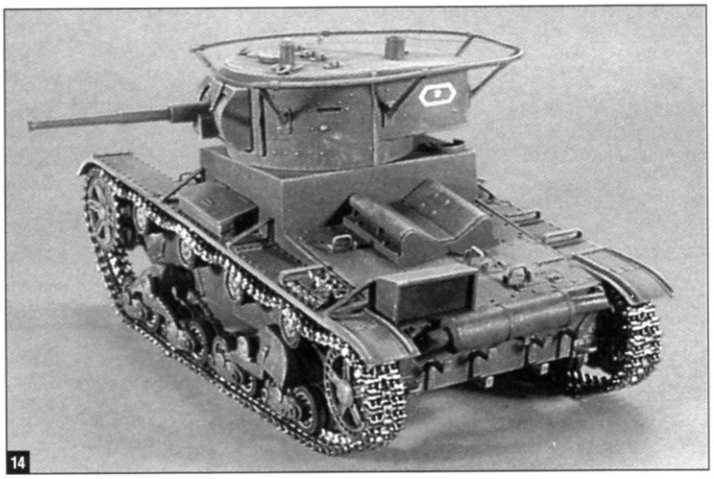
Paint and Markings

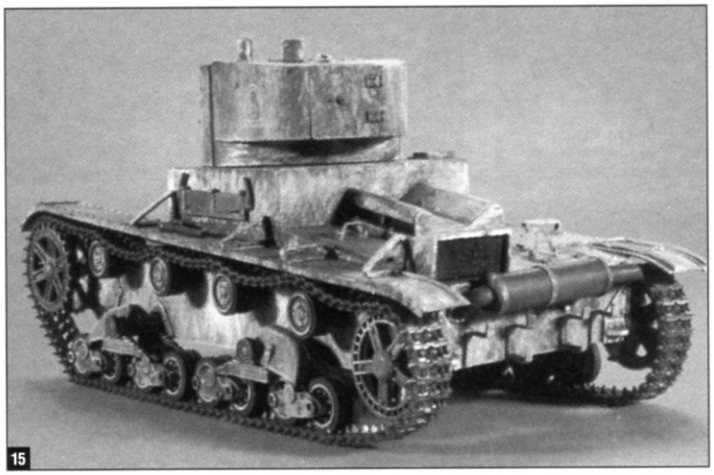
Not much choice here; either dark green or white, so I did one of each. The green one was sprayed with Pactra dark green, then drybrushed with lighter shades. Markings are Verlinden dry transfers.

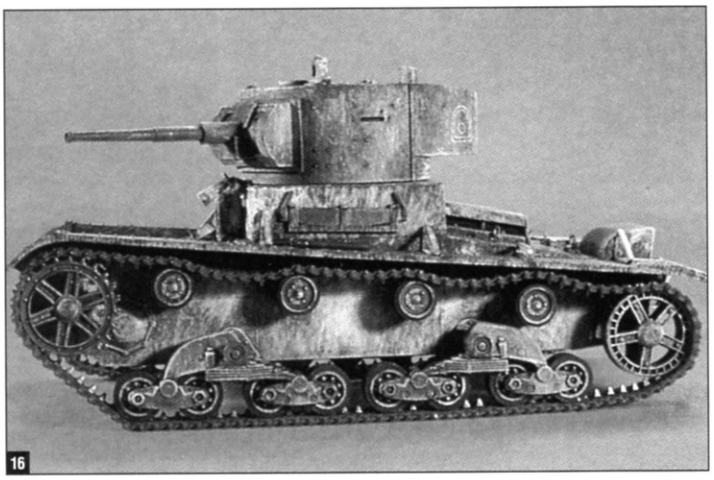
The white one takes a little more time, but here's one you don't need your airbrush for. Remember that the white that was used, at least in most cases, was whitewash. Whitewash is not very durable, and it was also applied in any way feasible in the field, for example, by brush, mop, broom, hand, rags, or even just splashed on from the bucket!

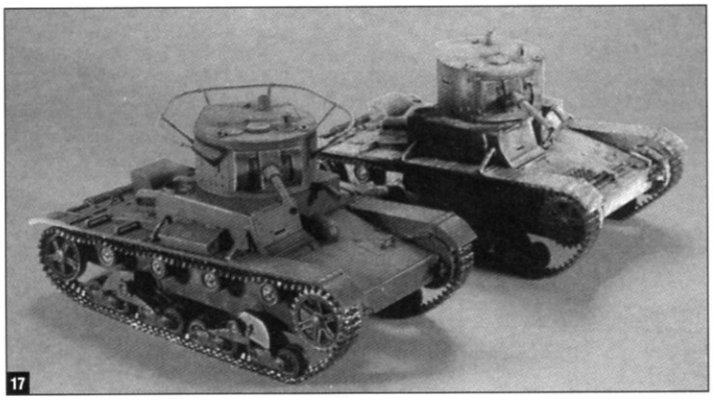
Begin this paint scheme by brushing on a coat of dark green. Make sure this gets down into all the nooks











13, 14. The completed green model. The track droops perfectly and the white metal adds nice heft. The markings are Verlinden dry transfers. The headlight was folded down, which is the common position seen in most photos. Note screen installed in the air vent, in place of the kit's crude plastic part. 15, 16. The completed white vehicle. To differentiate between the two (besides the paint) I left off the stowage boxes, which was common and erected the headlight, less common. The ModelKasten track did not drape/droop nearly as nicely as the heavier Friul track. Again the air vent is screened to replace the kit part. Turret markings are Verlinden dry transfers, like the green one. 17. Front view of the two completed kits; just leaving the antenna off the white one makes a big visual difference.

and crannies, but this coat doesn't have to be perfect. Streaks and light spots won't make any difference.

Now apply the "whitewash." I use Pactra camouflage gray for this; it's a very light gray, more like a dingy white, which is what you want. Put this on in a slapdash manner, and try to imagine a private with a broom doing it. I use a technique sort of like drybrushing to do this.

Now you need to go back and dry brush with the dark green. Do this very lightly, heavier in the high wear areas, like below the driver's hatch on the glacis. Any high areas, like the rivets on the fenders, would appear through the whitewash fairly quickly. The engine deck would get a lot of wear, but the vertical hull sides wouldn't. Get the idea?

The Track Sets

The Friul tracks are cast of white metal, and assemble by means of a wire pin inserted through the tracks and glued at one end. Each shoe must be cleaned of flash, and a small drill bit run through the holes. The easiest way to cut the pins is to set up some kind of jig; I used my Northwest Short Lines "Chopper" to do this. The wire is aluminum and quite soft.

The ModelKasten tracks are molded of styrene and assemble by styrene pins inserted into each side. Each shoe must be cleaned of its attachment points, although no drilling is needed. The pins are provided with an inside and outside pin on one sprue, so as you go you use each end. I found the easiest way to separate sprue from pin was to let the glue dry and then use a sprue cutter. The ModelKasten set also came with an axle for the drive sprockets to make them movable and some pins to make the already adjustable idler mounts adjustable. To me these parts are useless and add complications.

In my opinion the Friul tracks are superior. They are easier to assemble, if a bit harder to clean up. The white metal adds some needed heft to the kit. They drape much more realistically than the light styrene parts. The Kasten parts are, perhaps, more detailed; they are more time consuming, both in assembly and in the need to completely paint them. There's not a lot of difference in price, so you pick 'em.

—Joe Morgan

MMiR RECCE

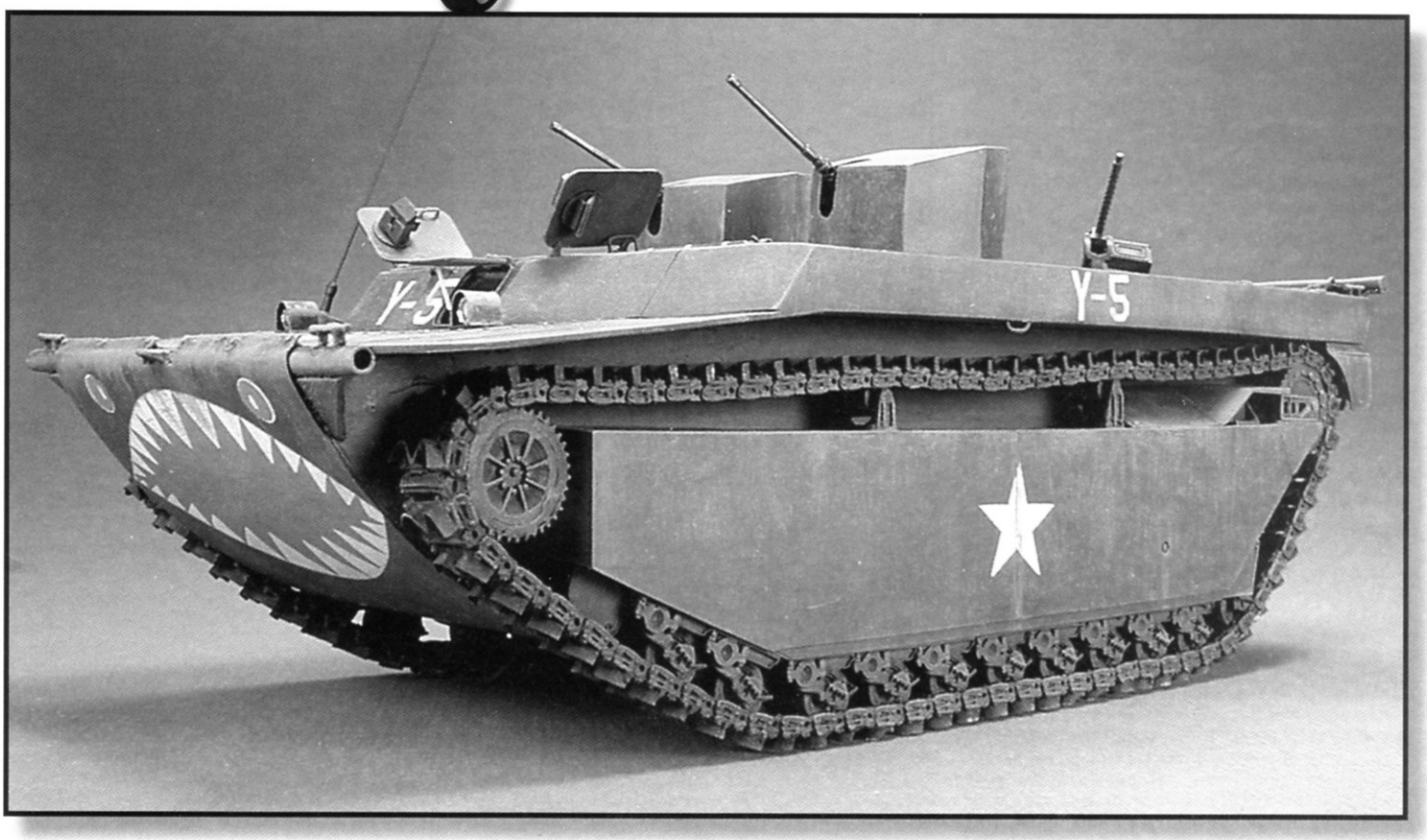
Testors/Italeri T-26. Kit number 0359. Suggested retail price $24.00.
ModelKasten T-26 track set. Kit number SK-38. Kit graciously provided by the manufacturer. Suggested retail price $29.95.
Friulmodellismo T-26 Russian/Polish Tank track set. Kit number ATL-45. Suggested retail price $39.95. Kit graciously provided by Friulmodellismo's U.S. importer, Chesapeake Model Designs.

References

World War II Tanks by Eric Grove, Longmeadow Press, Stamford, CT, 1987.
Russian Tanks 1900-1970 by John Milsom, Galahad, New York, 1970.

Sea ya later...

ALLIGATOR, THAT IS. IT'S THE SECOND VERSION OF THE LVT FROM CROMWELL MODELS



In progress photographs: Pete Harlem

LVTs (landing vehicle tracked) were the backbone of late WW2 in the Pacific. They came about almost by accident and yet, once fielded, were found to be so useful they were produced in large numbers and in several versions. More than 18,000 LVTs of all kinds were made during the war and the U.S. Army was issued most, with fewer vehicles used by the Marines and small numbers going to Britain and other allies. The Marines pioneered the vehicle with a buy of 200 LVT-1 in 1941 and more than 1,200 of that type would be made, most by FMC. Basically a tracked boat that could traverse from ship to shore, over the beach or reef, and well inland, LVT vehicles filled a need that was poorly understood at the beginning of the war. By the end of the war there would be armored versions, heavily armed versions (Amtanks) and exotics, such as flame-throwers.

In a while...

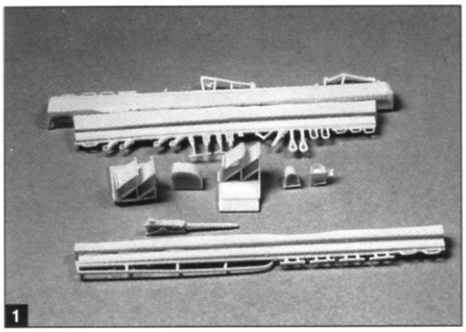
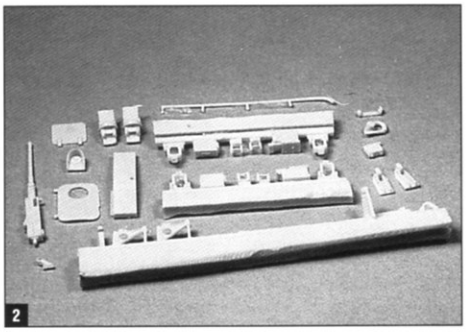
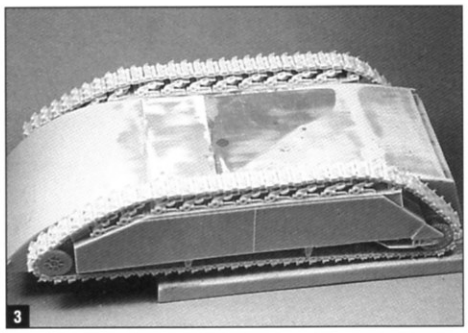
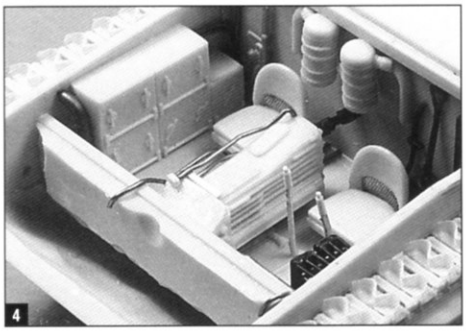
The original Roebling amphibious tractor (hence the name AMTRAC) was a floating box with tracks that propelled it through the water. Nicknamed "Alligator," the versatile design from 1937 was picked up by the military as the LVT, with the initial LVT-1 being close to the original prototypes. The LVT-1 was a cargo tractor, essentially, and did not have armor or other protection, but was armed with machine guns for self defense. Powered by a radial engine in the rear, the LVT-1 gave way to the greatly improved LVT-2 that featured better tracks with increased water propulsion. Both the LVT-1 and 2 (4,187 of both types built) saw extensive use in the Pacific, where the Marines' Amphibious Tractor Battalions were formed for beach assaults. The Army assigned most of theirs to Special Boat and Shore Regiments attached to the Engineer Corps. The Marines, with slightly more than half the production total, found the vehicles to fill the need for landing Marine infantry on the littoral zone of a hostile coastline. Unlike the famous Higgins Boats (LCPR and LCVP), the LVT could climb out of the water with its load of troops or cargo, cross the exposed reef flat and deliver the goods to the beach and beyond.

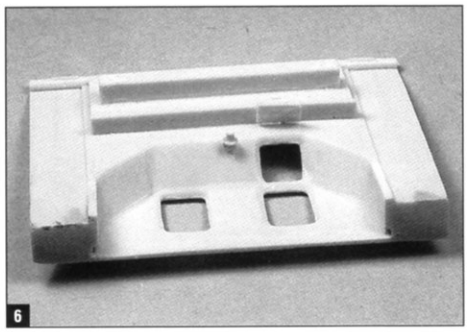
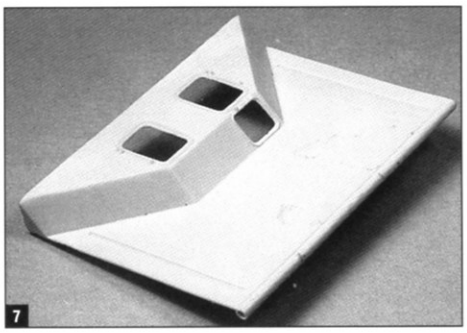
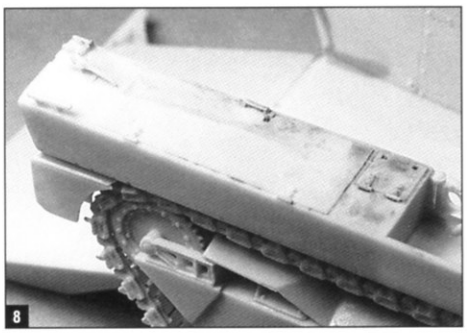
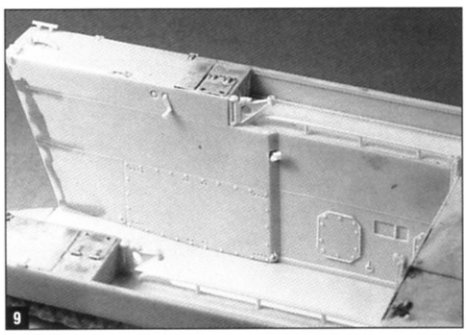
The LVT-4 preceded the LVT-3 into production in late 1943 and it solved a basic design problem with a rear ramp that allowed the troops to exit out the back, instead of the more dangerous route over the side. The engine was moved forward to accommodate this modification, making for more room in the back, and was now roomy enough to carry small guns and vehicles. The LVT-4 was the premier version used by the Army (6,000 plus of the 8,351 produced) and would find its way into British hands for use in Europe. The French would also get LVT-4s and found them useful in the Indochina War, where they even up-gunned some with 40 mm Bofors or other gun mounts. The British added a 20 mm Polsten cannon to some of theirs, but most LVTs were used with just the double set of cal .50 and cal .30 machine guns. Late in WW2, most users added armor shielding for the main guns, with a standard armor kit provided to Army units. The hull was also armored with steel plate for the sides and a large curved plate for the bow that could be attached to any existing vehicle.

The Marines' rear ramp version, the LVT-3, was much different in layout because of a change to twin engines mounted in the sidewalls and an automatic transmission designed by Borg-Warner. However, the LVT-4 was also used by the Marines (1,700 plus issued), even though most American LVT-4s were Army vehicles. The old Alligator name had stuck so you will see them called that in many references, even though the official name was changed to Water Buffalo with the advent of the LVT-2. The Marines preferred the nickname AMTRAC and the British used the foreshortened Buffalo for theirs.

The kit

Cromwell's new LVT-4 Buffalo is an all resin model of the most famous of the Amtracs and follows on the heels of their nifty LVT-1(A) Amtank. It reuses the suspension parts and tracks of the first

1, 2. Some of the smaller parts as they come out of the box. 3. A bit of putty was needed to neaten up the bottom of the hull. 4, 5. Some of the interior decorating. 6, 7. The forward hull piece and its flip side. 8, 9. The right and left rear sponsons. Small bubble holes and warping plagued this area. 10-12. The front and rear sprockets need a teeth pulling to make contact with the tracks. The tracks themselves are short straight sections. 13-15. The rear ramp and what it looks like down. This was less of a problem installed in the up position. 16. The forward end of the cargo bay. 17, 18. This shows the added bow armor. 19. I scratched the gun shield, using the kit's .30 cal MG's. Note the home-made boat hooks below. 20. The shields installed.

kit, but otherwise is a completely new molding. Cromwell has chosen to do this more difficult to mold version, instead of the LVT-2 they originally proposed that would have had more in common with the Amtank kit. This LVT then is the version familiar to British armor fans that was used in the Netherlands campaign and to cross the Rhine River. Curiously, that being the case, it does not come with the 20 mm cannon that would be popular across the big pond. Having said that, the Cromwell LVT represents a early to mid production LVT-4 quite well and can easily be changed in simple ways to make the more common American vehicle.

For U.S. Army ETO fans, the Army did constitute several Amphibious Tractor Battalions in Europe late in WW2, but none saw any action to speak of. The much publicized use of LVT-4s to cross the Po River in Italy was accomplished with Army Engineer vehicles, and many other crossings by Army troops were done with borrowed Buffaloes from British units. I decided to do mine as a Pacific war vehicle from the Leyte Campaign in the Philippines, which featured a huge shark mouth and was, I assume, assigned to one of the Army's many engineer battalions there. This vehicle had appliqué armor plate and also the standard Army pattern gun shields that are not included in the kit. I planned to add these as building progressed.

Laying into it

The hull comprises a very large piece of resin which makes the rear two-thirds and is hollow at the front, and a second large piece that makes the hollow bow section. There is a driver's compartment deck with some details, including the final drive, which is glued into the front section and a firewall/bulkhead fitted to the front of the rear hull piece. This seals off the driver's compartment from the companionways on either side of the engine box. I have a hunch the firewall should have provision for the crew to pass between the driver's area and the rear of the vehicle but none is given. The bottom of the hull has a rectangular opening and this should be filled with some kind of part that forms the deck for the companionways, but this piece was not in my sample. I have no idea what this would look like regarding any details that might be visible on the inside and visible (slightly) from the rear through the two companionway openings into the cargo area. I filled the hole with sheet styrene.

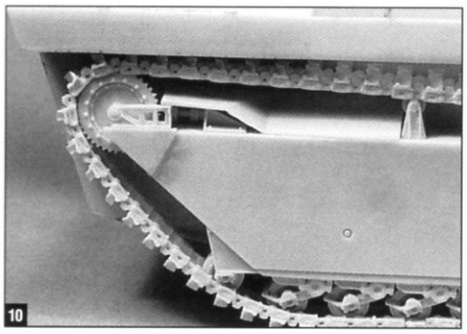
The hull parts have some warpage, as did almost every other large part in the kit, and that made assembly more difficult. A hair dryer is useful because most of the warps can be straightened with judicious use of heat and a little finger pushing. The hull bottom has a large sunken area at mid point and that took a lot of putty to make the belly flat. While doing this, I also eliminated the seams caused by the filler piece I used to plug the hole in the hull bottom. Not fun, but well within most modelers talents.

The side sponsons (pontoons?) are molded without troop steps. This would normally mean this is an armored LVT-4(A), which is OK since many of the vehicles had thin sheet armor plate added to the sides that covered up the step holes. However the standard armor upgrade included a bow armor appliqué plate, which is not given in the kit. A serious blunder in my opinion, but as the maker says in the instructions: don't tell him, he doesn't want to hear about any deviance from the way he designed the kit.

This statement took time to type out and that effort was wasted since the instructions are pitiful. We do get a couple of Xeroxed images from a tech manual that are of some use because these views are not available anywhere else. But a few more illustrations would have been nice because this is one vehicle not covered very well in detail books. One page of the instructions is the same as given in the LVT-1(A) Amtank kit, which would be fine, except it was not very good the first time and it does not help much because the construction is for a different vehicle type. With other references at hand, I managed to figure out where everything went.

Interior appointments

The driver's compartment includes seats, a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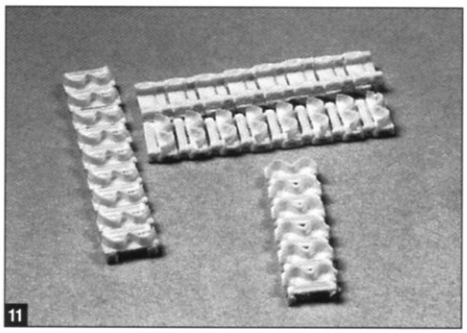
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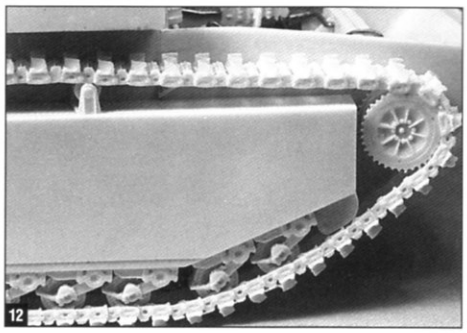
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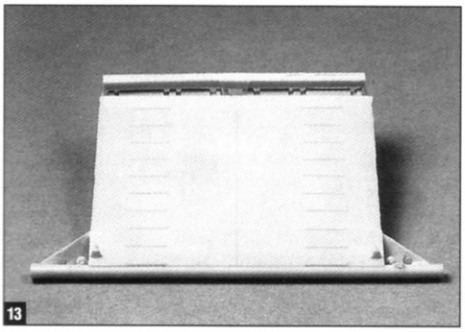
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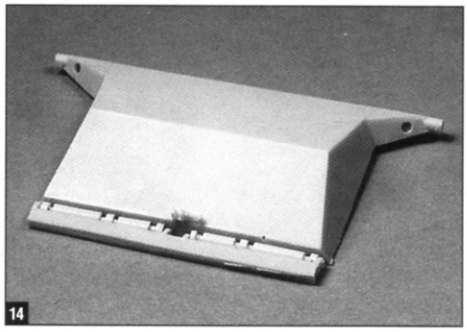
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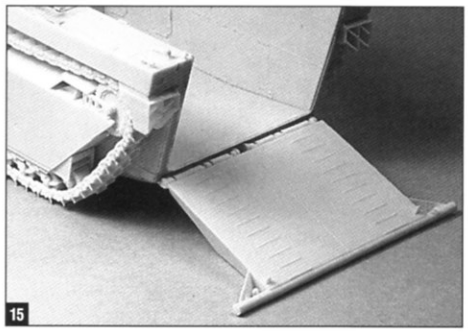
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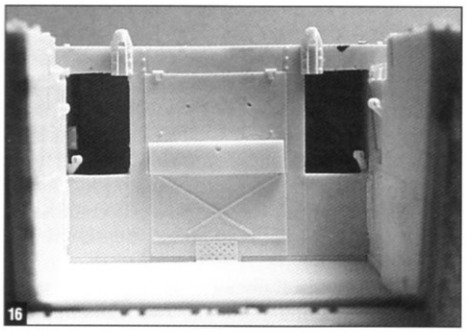
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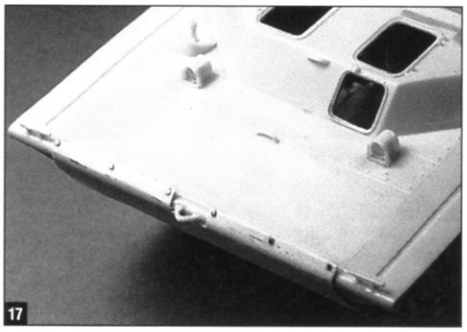
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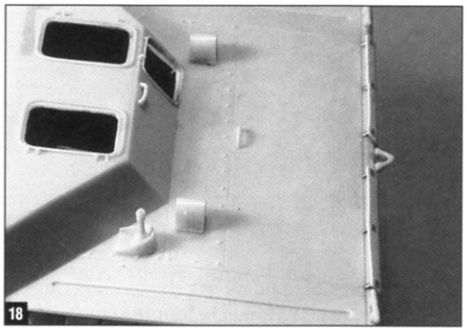
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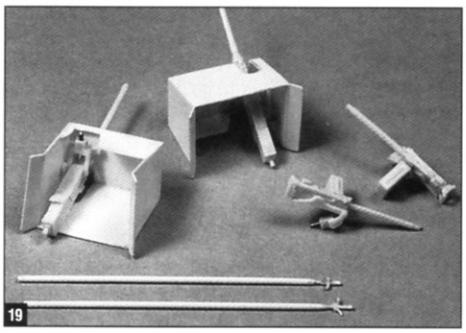
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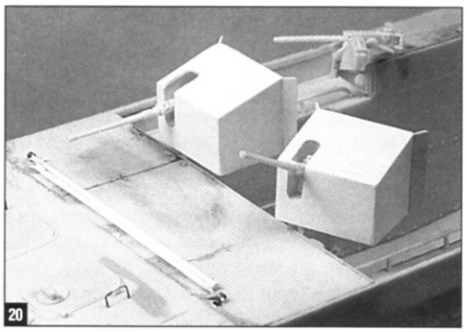
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transmission, drive shaft, the bilge pump handle, and driving levers. There is a nice rendition of the radio cabinet on the right side, a pair of air filters for the firewall, and the small electrical panel for the left wall, but nothing else. I added wires to the latter and put a solder tube for the bilge pump outlet in front of the cabinet.

I looked several times at the kit-supplied resin "sprues," but did not identify the driving levers, bilge pump handle, and drive shaft as parts. They looked like the scrap overpours common in Cromwell's kits, so I first thought the parts were missing. I made my own levers and handle and stole a drive shaft from a truck kit and installed these before I realized the kit did indeed include these parts. My mistake, but one aggravated by the poor instructions that did not include a parts list or "sprue" diagram.

Two filter cans are provided to attach to the rear compartment bulkhead and I figured out they go on the two bumps molded to the bulkhead between the driver's seats. I put some other stowage, a Thompson SMG and pioneer tools on the bulkhead, which is where they go on at least one type of LVT. One photo in my references showed two GI water cans mounted below the left electrical panel, so I added those and the same photo suggested there is some kind of ammo stowage box to the left of the driver's seat. I made one up and filled the empty space there with it but have no feel how accurate this is. There are several large diameter oil lines running alongside the transmission, so I added a fair approximation of those with solder. If you are going to close the hatches, all of this can be ignored and will save you a lot of time and frustration, but with all the hatches open the interior is visible.

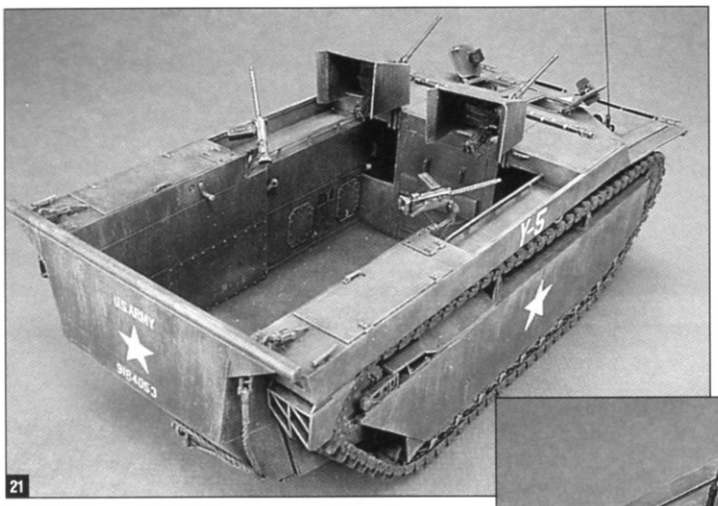
The instrument panel is small and mounts on a flange on the top front hull piece. There is no detail on the instrument faces, but this item is hard to see through the small hatches, so no big deal. I reshaped the edges of the hatch openings to thin them a bit and I added a fake compass housing to the hull top in the center (to the right of the instrument panel). This item is visible and should have been in the kit. Another flourish was my idea of cutting the hollow area from the seat backs and filling the resulting hole with mesh screen cut to fit. The seat cushions apparently sit on a perforated metal seat structure and this change simulated the visible part of the structure reasonably well.

The hull from hell

The hull is massive and needs a lot of work. The overhang of the hull sides is supported by a number of triangular gussets that must be removed and after doing this you will find the entire underside of the overhang is riddled with bubble holes. I hate bubble holes and spent several more hours taking care of the problem and trying to square up the joint between the hull sides and the overhanging structure. Not fun, not fun at all!

The sponsons did not fit on the sides well and, even though I located them properly, they installed at a position that threw the rear drive sprockets out of alignment with the axle holes molded into the rear hull.

This prevented the use of the axle holes, so I had to cut the axles off the sprockets and use punched styrene disks to support the sprockets. The sprockets, idlers and mounts, and bogie wheels come from the previous kit of the LVT(A)-1 Amtank and were familiar territory this time. That means they are just as ornery to get in proper alignment and it is, therefore, important to make sure everything lines up or the tracks do not go on straight. The drive sprockets at front and rear are different sizes, but



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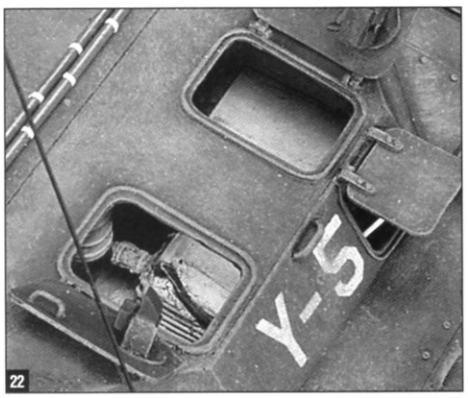

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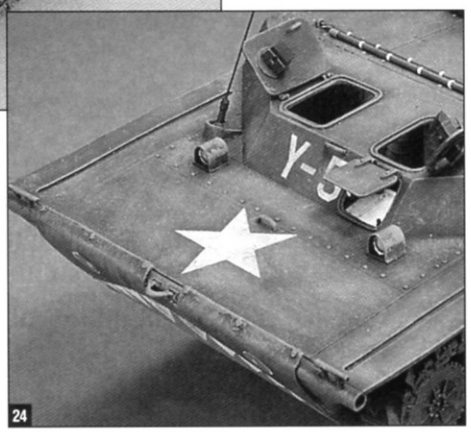

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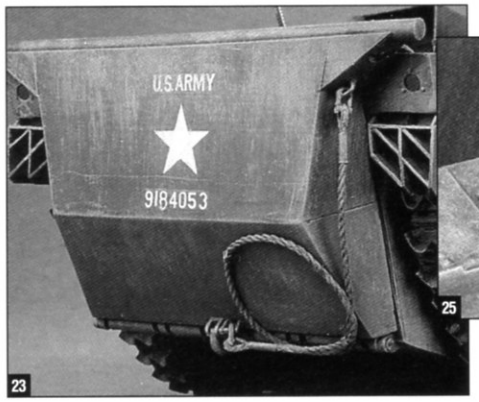

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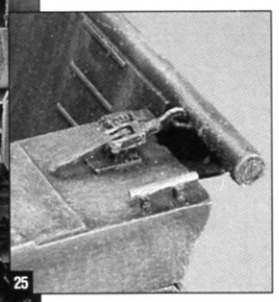
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both are assembled by adding the toothed rings to the hub centers. As I found before, the track did not line up with the sprocket teeth; I had to shave off the teeth where the track is in contact with the toothed rings.

The bogies are fixed, and thankfully, just a single piece each. They mount on the sponsons and as long as the sponsons are mounted properly, you should get a pretty good fit with the ground. At the front of the sponsons is a small block piece that helps keep the tracks in tension (I suppose) and these must be aligned with the bogie wheels, also. The rear-most bogie is different in this kit from the regular bogies, so make sure you identify these before you stick them in the wrong place and end up throwing the kit against the wall.

I had more trouble with the sand shields that mount over the track adjuster mechanisms on this kit than on the previous Amtank kit. This is in part because they were badly warped and also because they are not as cleanly molded as before. Some of the parts used in the previous kit are looking like the molds are going, but perhaps yours will not suffer this.

Tracklaying

The tracks are the same parts as before and look great once you get them on. While my previous experience trying to build and bend them came in handy here, they still are a bitch to assemble because you pretty much have to do this on the vehicle. They go on the drive sprockets and, since those mount to the hull, you have no choice. So I made a straight run from the track pieces that was long enough to stretch from front to rear on top and installed that first.

I glued small pieces of styrene to the end of each track section, which became a tab that I could use to support the next section, while the glue dried and helped to make sure the sections did not come apart while bending the track. The track was bent around the sprockets with lots of heat applied with a hair dryer and with patience. I got them to go around without too much cursing and the technique is best described as: heat, bend, heat, bend and so on. Frustrating, but the damn things work.

The mis-located sprockets caused problems at the top rear of the track. I had to sand the grousers at this point to get them to go around the rear and fit between the sprockets and the hull top. While doing this, I wished I had lowered the sponsons a millimeter or two from the correct location so there would be more room here, but it was too late by this point. Once installed, I used more heat to get a gentle sag in the top run of track.

The mis-located rear sprockets caused one more problem. The rear water deflectors (the waffle like structures at the back of the hull) mount under the rear overhang. As they come in the kit, they cannot be mounted forward enough without hitting the track over the rear sprockets. I modified these to fit by cutting the forward ramp shape and reworking the result. Not prototypical perhaps, but I did get them on the damn tank. Warning! They are also very thin, and can be easily destroyed by a ham fisted modifier, if you get my drift.

Into the cargo bay

The rear ramp has two "tangs" at the top that fit into depressions molded at the top of each hull wall, but because of warpage of the hull they do not fit precisely. They have a small reinforcing gusset molded on that must be removed to get the ramp to close fully. The water seal around the ramp opening was broken on my kit. Since I chose to close the ramp, this was less of a problem than it would have been if I had left it open.

The ramp hinge is workable, which makes it possible to play with the ramp in the up or down position. However, because of the ramp cables used to lower and raise it and the details of the ramp locks on top of the sponsons, this is not practical if you want to remain in scale. So I had to decide if it would be RAMP UP or RAMP DOWN, and the former command won. The hinges are not all that strong, so leaving it free to open was just a way to break it off, but if you plan to put the LVT on a diorama base, then the ramp in down position is the way to go. I glued the ramp shut and this solved the warpage problem that had spread the rear hull sides apart.

I noticed that some Amtracs have truck type wooden bench seats in photos, but no provision is given for this. I have seen other tracs with plywood seats that fold against the cargo bay sides and the lack of standardization suggests that troop seats were a field modification to some LVTs. Because most do not have seats, feel free to forget this detail. A pair of seats from the back of a GMC truck kit will work, if you can figure out how to install them.

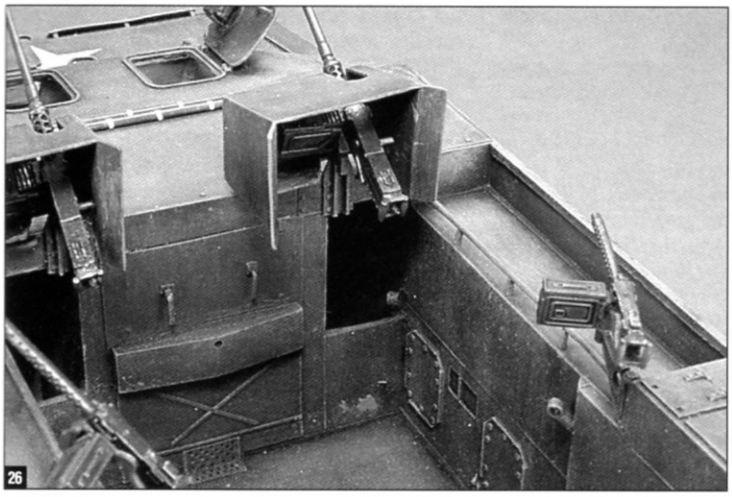
The cargo area has some cleanup problems to fix. The rear opening for the ramp is not smooth on the cargo bay side walls and I had to sand one side and fill the other with putty to clean this up. The openings into the companionways are rough and need some cleanup work too. The hull front top decking does not fit worth a tinker's damn and I had to glue it at the back for best fit and then torque it down at the front to get the bilge outlet tube and lower front hull to mate properly. The joint of the hull top decking with the top of the rear hull is not very good and putty and reshaping was needed to get what you see here. Not fun.

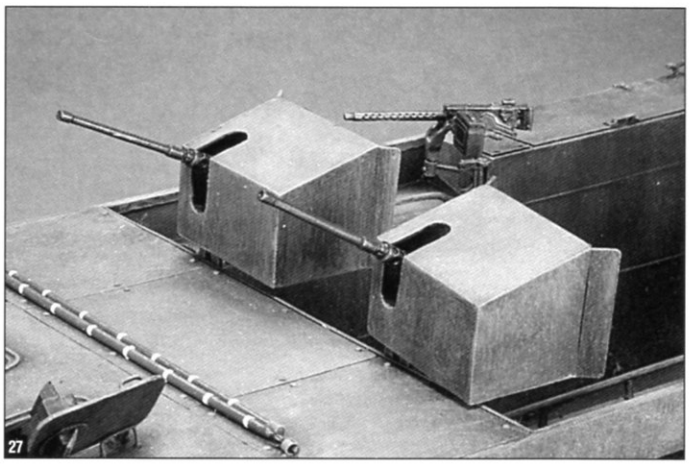
I then added the missing bow armor plate using a large rectangular piece of sheet styrene. This runs under the bow and at the top front is notched so that it clears the towing fixture on the bilge pump outlet tube. The armor is curved at the top edge to fold it back over the decking and held in place there with a row of bolts. I drilled the styrene plate and used stretched sprue to simulate the bolts. This was easier to do than I thought.

Details

The driver's hatches have holes for the periscopes and both hatches were warped badly. I used heat to straighten them some, but in hindsight I probably would have done better to replace them with new ones made from styrene sheet cut to match the kit parts. For some reason, Cromwell's thin sheet resin parts are not as malleable with heat as the bigger ones are and they tend to return to their warped shape. The periscope detail is nice and being able to show them in various positions is a nice touch. But for open hatches, it would have been nice to get closed periscopes as an option. There is no detail for the hatch locks or other bits on the inside of the hatches and I had to add a brace for the front driver's port to support it when open. With the hatches open, you can look down into the driver's compartment and see the nifty details.

There are a pair of nibs on each side of the rear





21. All done. The view from the top. 22. They're not easy to see, but the interior bits are visible. 23. That troublesome ramp looks pretty good when complete. 24. The supplemental armor on the bow. 25. The very delicate ramp clamps. 26, 27. These two shots show off my scratchbuilt gun shields well. The kits machine guns were used, but the pintles needed a little work. No details on the shield mounts were available, so I improvised. Also note my scratchbuilt boat hooks located just forward of the shield in shot 27. The stripes were created using decal film.

hull that are part of the ramp lock mechanism and these were broken off several times while building the kit. I would have preferred to have this detail as a separate part. If you turn the heavy beast over, then they will get broken, I assure you. I also had to replace a broken U-ring at the edge of the ramp that is hooked by the ramp lock. The ramp wind up handle is provided in the kit and is installed over one of the two dimples on the left side wall.

Since most American LVT-4s sported boxy gun shields for the .50cal MGs, I would have liked to have these in the kit. There were several patterns and any one would have been nicely received. They were not, so I had to make my own. I realize that Cromwell probably wanted to do the vehicle in the pattern as issued to Brit units early in the LVT-4's history. The U.S. Army had upwards of 6,000 of these things and most had gun shields added before going into combat. A minor bitch, perhaps, and if you decide to do yours with gun shields, then make sure you study the vehicle a bit, since USMC shields were often not the same as U.S. Army items. I chose the most common Army pattern, which is identical on left and right sides.

The kit guns were used and, other than a slight amount of barrel warpage (hair dryer job here), are well done for resin guns. I modified the pintles for the .30 cals to make them appear more prototypical. An alternative, although more expensive, would be to use aftermarket guns with proper pintle mounts. I was baffled as to how to attach the gun shields to the .50 cal mounts, but ended up using styrene bits to make them fit low enough to provide some protection for the gun crew.

LVTs were issued with two boat hooks. These are stowed on the top decking and the kit includes the stowage brackets at the back of the engine compartment roof panels. These panels are installed backward on the kit, which was common on Amtracs in the field, but the normal installation of the panels puts the brackets at the front of the roof. I cut the brackets off and moved them forward and because no boat hooks were provided, I made my own from styrene rod and scratch built end bits. The boat hooks have white stripes painted at one-foot intervals to facilitate water depth measurement. I used decal stripes for this.

Paint and markings

I have no idea what color British Buffaloes were painted, but olive drab is a good starting point, since the principle user, the U.S. Army, painted them in that color. In the Pacific, they might also be seen in USMC green late in the war and others were battleship gray or camouflaged. Army Amtracks usually sported large star markings on the sponson sides and on the front hull deck. You can tell an Army trac from a USMC one most of the time by the presence of stars. Unit markings and beach stripes can be found on the superstructure sides and front, with letter and number codes common.

The interior of the driver's compartment is mostly white, with dark colored seat fabric (olive drab probably). The driver's hatches are exterior color on both sides, so no white there. The cargo bay areas are the exterior color as, I assume, was the inside of the engine access companionways. The tracks are steel with aluminum grousers. Base color for me was Tamiya Olive-Drab with black wash, lots of dry-brushing to weather the paint, and rust stains and streaks to show some use in the tropical climate.

The markings I chose required a trip to the decal box to scrounge stars, codes and registration number. No matter what vehicle you want to do, this will be necessary, because the kit does not have decals. The shark mouth on the front was made by spraying clear decal film with red and white paint and then cutting out the mouth shape (white) and the area between the teeth (red). The red decal goes over the white mouth shape and that makes the teeth pop out. I could not find an exact match for the letter codes of this vehicle, but came close.

Conclusion

You can add a jeep or small gun in the back as cargo, or a bunch of GIs or Marines heading to the beach. If you want something unique to put on the Tamiya Dragon Wagon, then this is your kit. Cromwell does not provide the later bow MG mount or gun shields, but both can be made up without problem. Without a lot of fuss, you could backdate this thing to the original LVT-4 with driver's window ports. Another idea is to do a French vehicle in Indochina. Many of these had colorful markings and interesting modifications, so the kit is versatile in all respects.

This kit is better and more ambitious than Cromwell's previous Amtank kit because it is a more open vehicle and includes the driver's compartment details. It does a fine job capturing the Water Buffalo in both detail and proportions, too. About average for resin kits, it has many fit problems and is a bear to build in some areas, so I cannot recommend it to any but the most hard core resin geeks. If you have little or no experience with big resin kits, then stay away. But if you need to have an LVT-4, then the resulting model looks superb. Expect to take at least a year off your life-span building it, mostly because there are few references to help get things straight. It is expensive compared to styrene, but this is a very popular subject that has been long neglected by the styrene gang. Until we get a good plastic trac, this one will do.

—Pete Harlem

MMiR RECCE

Cromwell Models LVT4 'BUFFALO.' Kit number CK75. Kit graciously provided by the manufacturer. Suggested retail £72.50 (about $116.00).

References

Stuart, A History of the American Light Tank by Richard P. Hunnicut: Presidio Press, 1992. This book's chapter III (pages 259-293) covers the history and development of the LVT series, with many photographs included.

Landing Vehicles Tracked: AFV Profile No. 16 by Robert J. Icks, Profile Pubs. Ltd., Windsor England. Several photos of LVT-4 and a brief history and specifications listing.

US Army Vehicles of World War Two by JM Boniface and JG Jeudy, Haynes Pub. Grp., Newbury Park CA, 1991. Pages 92-102 of this book include a history and details of the LVT series with extensive coverage of French vehicles and a section on amphibians used in Indochina. Some of the photos are useful for external detailing.

Amtracs in Action by Jim Mesko, Armor Number 31, Squadron Signal Publications, 1993. This is the best single source of LVT pictures, even though the Mark 4 model is only given brief coverage.

Amtracs: US Amphibious Assault Vehicles by Steven J. Zaloga, Osprey-Vanguard No. 45. Covers the history and use of the entire series, with a few photos of LVT-4s and several in the color plates.

continued from page 46

The engine was painted with various shades of gray and dry brushed with gunmetal. Certain areas were repainted with gray to enhance the steel-like look. The engine exhausts and pipes were painted dark reddish brown. Oil stains were added to the engine and transmission using a mixture of Tamiya Clear Yellow (X-24) and Gloss Black (X-1).

The tracks were painted with a mixture of Black (XF-1), Red Brown (XF-64) and Flat Aluminum (XF-16). The track pads should be a rubber color and I didn't relish painting each by hand. Instead, I cut a small template out of super thin styrene sheet the same size as the pad, but smaller than the lip at its bottom edge. This allowed me to jam the template over each pad and quickly spray it flat black. This was done after drybrushing the tracks with gunmetal.

Tamiya suggests semi-gloss black for the seats. I suppose this is accurate, as they were originally made of "artificial leather" (a.k.a. vinyl?). However, I like the canvas look. I usually use a dark brown base and apply several thin coats of watery black. After the model has been given its overall wash, I dust the seats with dark brown pastels.

I used the Tamiya decal number-plates, but the remainder of the markings are dry transfers scrounged from my spares. I marked the FAMO as a workshop vehicle of the GD division.

The kit's decals include more of those masterfully rendered placards. These install on the insides of each locker door. The area where the decal goes has a large knock-out mark, so I simply cut it off the sheet and glued it on with it's paper backing.

The overall wash is burnt sienna and black thinned with Model Master enamel thinner. While the surface was still damp, certain areas, such as prominent rivets or other raised detail, got a slightly thicker mixture.

Drybrushing was done with a medium gray and the undercarriage was also dusted with dark brown pastels, as were the tires. Most of the pastel was then rubbed off the surface of the tires, leaving only "dirt" in the treads and other low areas.

The window glass was added last, as were the side light jewels. I used MV lenses number LS2 (the smaller of a two light set), but I believe LS116 (one to a pack) would be a more accurate fit.

When painting was complete, I threw a few white metal 1/25th scale wrenches and a hammer in the drawers and just for the crap of it, I stuck a Tank Workshop Panther tranny in the back bed, along with a few chains and the folded up draw bar.

And the moral is...

This was one fan-foo-foo-tastic model. Great detail, great assembly, great diorama possibilities—not so great price. The $82.00 retail was a bit of a shocker, especially when comparing it with the Dragon Wagon, which contains nearly twice as much in the box for only $37.00 more.

That having been said, there are those that will have to have it at any price (that would be me). It certainly represents a high value, due to the elaborate nature of the kit, the link-to-link tracks and all the accessories. How much of a value is up to you.

There are lots of possibilities with this model. A subsequent version with the crane would be nice, but if it's not in the cards from Tamiya, I'm sure one of the after market people will jump on it. Ditto on that big trailer. Many FAMOs sported a large spade (somewhat like the Bergepanther) and a small winch to raise it with. This would be another good aftermarket item. It would also be interesting to convert the kit to the later version with the cut-back fenders. And so the FAMO marches on!

—Pat Stansell

MMiR RECCE

Tamiya Schwerer Zugkraftwagen 18t (Sd.Kfz. 9) "FAMO." Kit number 35239. Suggested retail price $82.00. Kit graciously supplied by the manufacturer.

References

Die Halbkettenfahrzeuge des Deutschen Heeres 1909-1945 by Walter J. Spielberger. Motorbuch Verlag, 1989. ISBN: 3-87943-403-4. The German language history of all German halftracks, it contains a pretty good, albeit short, section on the FAMO, plus a bonus Uwe Feist color plate.

Militärfahrzeuuge of the Wehrmacht, Vol. 1 by Kurt Rieger and Uwe Feist, Ryton Publications, 1997. No ISBN. All types of military transports are depicted here, but the section on the FAMO is good-sized with over 20 photos, plus a color plate.

Combat History of the Schwere Panzerjäger Abteilung 653 by Karlheinz Münch, J.J. Fedorowicz Publishing, 1997. ISBN: 0-921991-37-1. For some reason, this massive work includes an excellent selection of shots of the FAMO at work, hauling Elefants back and both across the Russian steppes (by the way, it took five FAMOs for that).

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6.	NF-1011	PKW K1 Kübelwagen type K2	£9.99	$15.98
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Me and my ARV

RESIN + WHITE METAL + PHOTO-ETCH = HOBBY LOVE

While wandering through Euro-Militaire one day, I stumbled upon the Accurate Armour booth and what did I see? The premier of AA's latest in the ever-expanding line of Centurion kits. Not just any Centurion, but the Centurion ARV MK-II mastered by no other than Derek "the man" Hansen. OOOO-AHHH. There it was in all its unpainted-first-time-out-glory. After dropping to my knees and kowtowing 1,000 times to the resin gods, they graciously let me have one for review and mainly to get rid of me. So there I was on the plane with the kit safely between my legs and life was good. Incidentally, the box made a good tray. With the kit safely home in the good old U.S. of A., it was time to dig in.

All about ARV

The Centurion ARV MK-II was developed in the early 1950's as a replacement for the interim ARV MK-I. The ARV MK-II was based on a Centurion MK-1, 2, 3, or 5 chassis. The turret was replaced with a large box super structure, housing a large winch, which was powered by an auxiliary engine. When used in conjunction with the rear spade, the winch is capable of a 30-ton direct pull and a 90-ton pull when a 3:1 block and tackle is used. The rear pulley or Fair Lead was positionable and was capable of making side pulls of up to 20 tons. This was a very useful feature when righting lighter vehicles that overturned on narrow roads. The ARV MK-II could pull alongside the stranded vehicle and perform the recovery without disrupting traffic flow.

For pushing operations, a large wooden bumper bar was provided, which fit into a socket on the front of the vehicle. A two-piece aluminum jib with a lift capacity of 10 tons could be mounted to the front of the vehicle. The design of the jib could only handle forward and backward movement when lifting; any side movement could cause the jib to collapse. The jib was not usually stowed on the vehicle. The ample stowage boxes allowed for the storage of various heavy-duty repair and recovery tools, including oxy acetylene cutting and welding equipment.

The Centurion ARV MK-II went into service with the British Army in 1956 and served in combat in the Suez, with the Israeli Army, the Australian Army in Vietnam and the BAOR. In 1962, some ARV MK-II's were modified to carry two 105mm gun barrels on the track guards. Due to a lack of lifting capability in front line units, the conversion fell out of favor and a majority of the conversions were converted back to their original configuration.

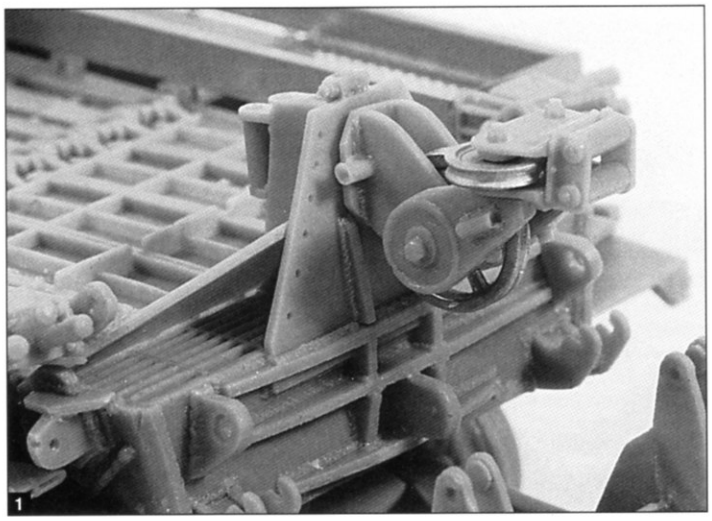
Engineers have a tendency to tinker with their machines, so many unauthorized variations and modifications became the norm. Some units actually erected a canvas Penthouse over the rear deck and modified the rear searchlight plugs to accommodate a small stove and a TV. With the heat from the auxiliary engine, the soccer game on and hot tea and crumpets, the REME dudes had to be the envy of the guys on the ground.

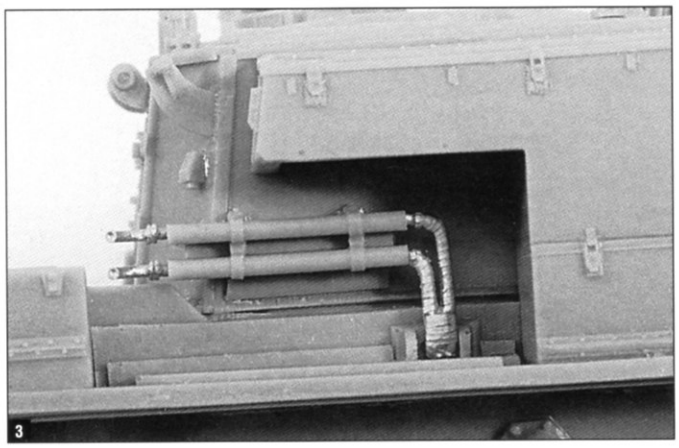
Pass the crumpets

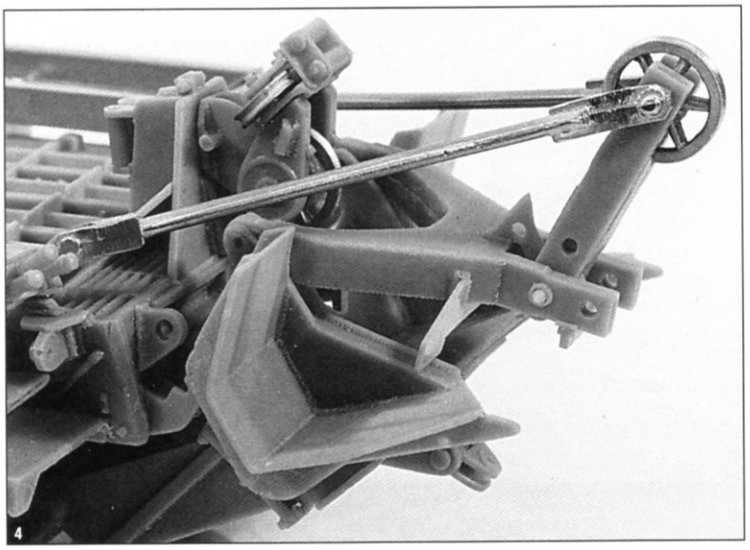
While we have seen some really outstanding releases this year, things we never thought possible, AA has been quietly producing a line of excellent Centurion kits which haven't really gotten a lot of press in this part of the world. Pity! The kit is a full resin multi-media affair, sharing some of the components from AA's other Centurion kits, mainly the suspension and road wheels. This is a very intense kit, loaded with goodies and includes many options, such as a working spade, positionable hatches, positionable fair lead (rear pulley) and some pretty snazzy recovery stowage. All in all, a very impressive package.

I began the construction by joining the upper and lower hulls. A minimum of clean up was required to obtain a good fit and a minimal amount of filler will be required. Before adding the large side stowage bins, parts X & W, the mufflers for the auxiliary engine were added to the right side. I figured it would be easier to get at them without the bins in the way. The bins themselves required some fine sanding to get an acceptable fit. The fenders were slightly warped, so I straightened them a bit by putting the whole kit in the micro-wave for 15-second intervals. I was able to straighten them out, but a little filler was required on the bottom edge.

The suspension is quite nice and is the most time consuming portion of the assembly. The bogie units were assembled leaving the spring, part H, loose. The damper units, part J, were attached to the ends of 4 of the 6 units. The dampers go on the front and rear units. Before attaching the units I added the return rollers and their mounts. With the units mounted, the model was set on a flat surface so all







the springs were level. The model was then flipped over and the springs were nailed down. The link arms, part K, could now be attached to the first and last units. The final drive housings, part D, required a little carving so they would clear the rear most link arms. The wheels were attached and the sprockets and idlers were left off to make the adding of the tracks a little easier.

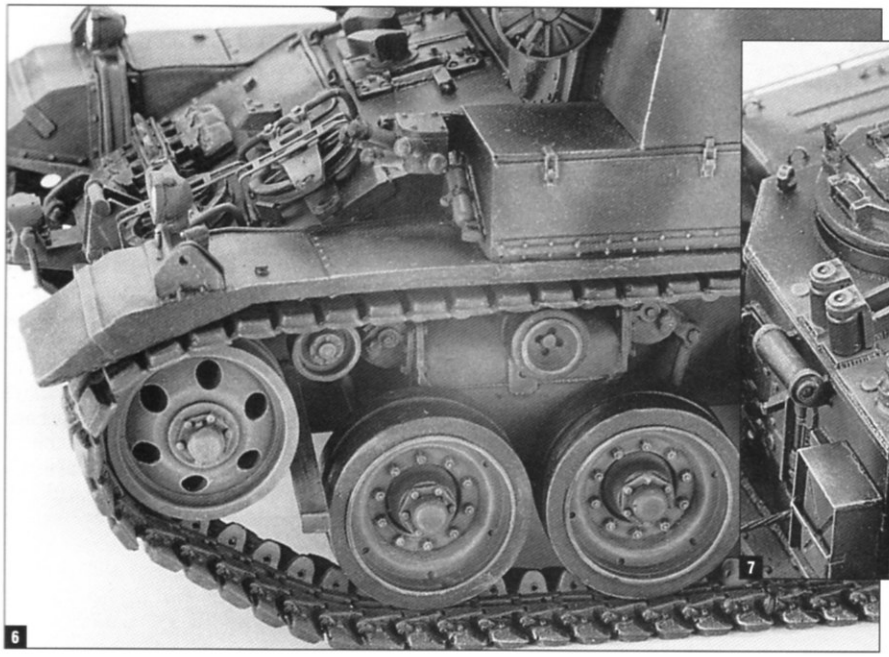
The tracks are resin lengths and are the square block "hush-puppy" pattern. This square block track is commonly seen on the ARVE, but is also common on contemporary ARVs. The tracks themselves are beautifully cast and require little clean up. Good show guys!

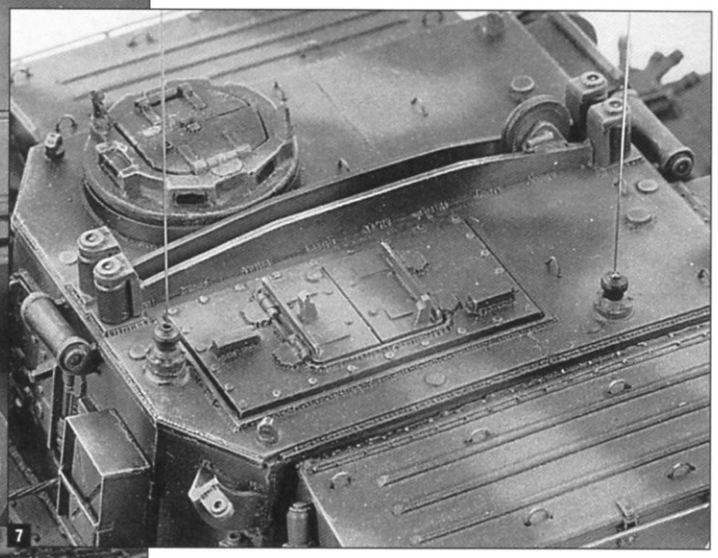
If you wish to build an older ARV, the kit can be ordered specifically with the steel tracks.

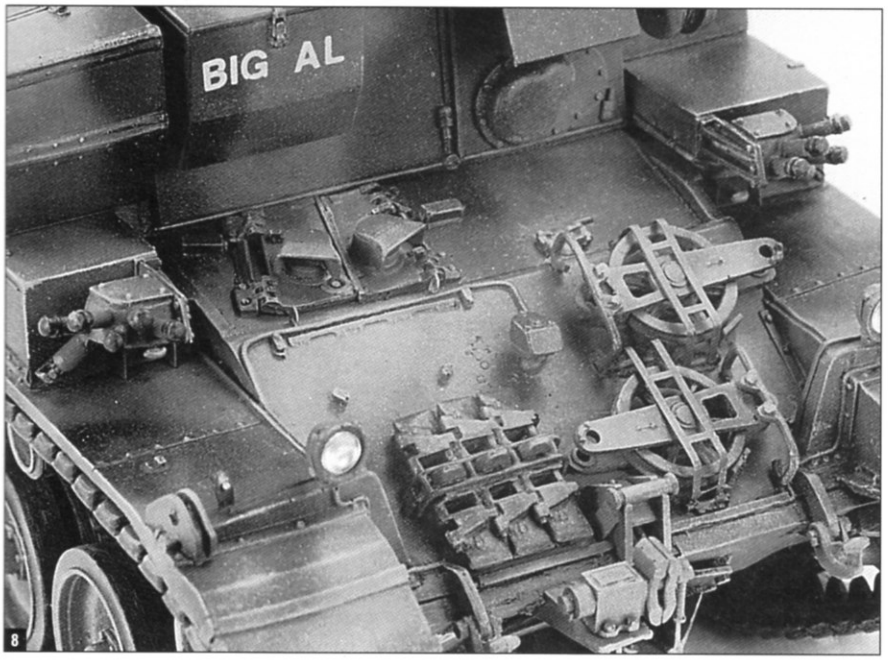
The tracks were attached using the tried and true boiling water method and only required the removal of one link on the right side to get a good fit. A word of caution; be sure the tracks are thoroughly heated and pliant before attaching or tweaking. The material between the blocks is quite thin and breakage can occur.

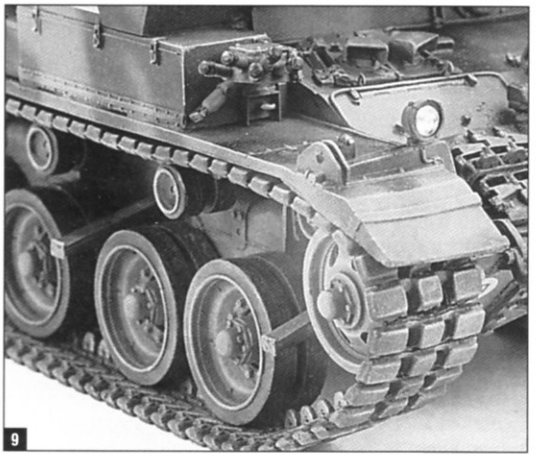
The detailing began with the rear super structure. The rear hatches can be positioned open or closed, but with no interior, I opted to close them. Be careful of the bend lines on the photo-etched mountings for the jerry cans, part E11. I think mine are backwards. AA provides a very nice searchlight that can be mounted on any of the two rear mountings, part A0, or the one on the front left. I decided to leave it off; many photos show the absence of the light. The rest is pretty straight forward stuff.

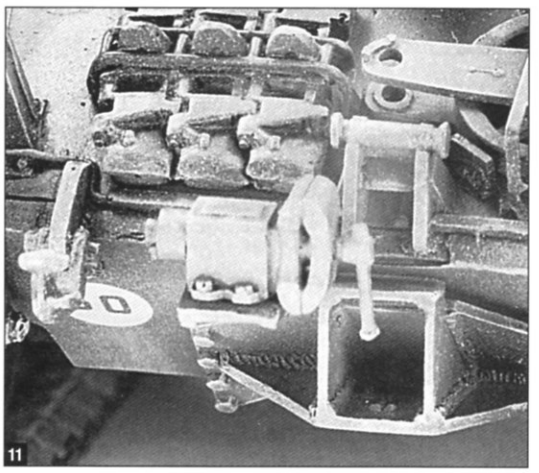
A large grab handle is required on the top of the left and right bin. This

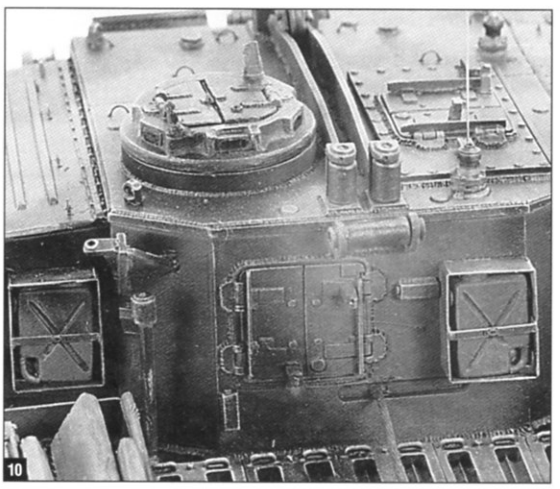








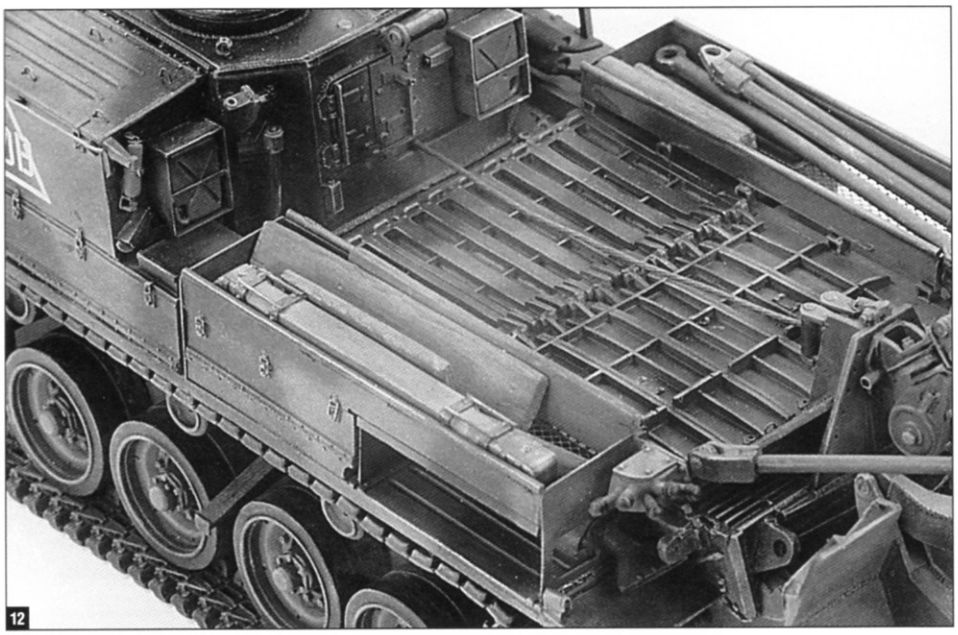




1. This is the rear fair lead before the addition of the spade mechanism. The spade can be positioned after assembly, but the fair lead has to be located during construction. I chose the traveling mode. 2. The rear of the super structure. The back doors can be positioned open or closed. Check out those jerry can holders. 3. These are the mufflers for the auxiliary engine in resin and white metal. 4. The spade and its stabilizers are installed in the traveling position. 5. Here it is in the down position. 6. The suspension is time consuming, but it's one of the nicest areas of the kit. 7. The top of the superstructure. Again, there is the option of open hatches. Those teeny photo-etched handles are a wonderful touch. 8. All the equipment is well rendered and super sexy. The very busy front end. "BIG AL" (an homage to) was formed with dry transfers. 9. These are the rubber block "hush-puppy" tracks. I removed one link per side for a good fit. AA will sell the kit with the older steel tracks. 10. The completed superstructure. This shows the guide and pulley for the main winch. 11. That sweet little vise assembly on the front end.

was a fun step which involved placing five microscopic P/E mounting brackets, part E2, on the right side and four on the left, because the left side handle is shorter. These brackets are loads of laughs to clean up, if you can grab them. Their locations are marked, so placement isn't a problem. Lengths of brass rod were cut about 4mm longer than the top of the bin, so when the ends were slightly bent inwards, there was a 2mm overhang on each side. I love this kind of stuff. I know, "he's crazy."

The top of the super structure was a breeze. Again, you've the option of positioning the hatches. I lightly tacked the hatches so I could add some figgie's at a later date. The commander's copula is a separate piece, so it was left loose so the painting of the vision blocks would be



12. The lavishly detailed back deck. I thought the photo-etched stowage boxes were the highlight of the model. I would, however, recommend using a machinist's vise on them to get nice, square bends. 13. That awesome looking earth spade. I left it workable (I couldn't help it). The spade was weathered with Hudson & Allen mud, then dusted with sand color pastels. Also note the stowage for the baskets in both photos. AA rocks!!!

would be a shame to cover that suspension and many photos show the ARV without side skirts. The suspension was dusted with Tamiya flat earth and the entire model was sprayed with Tamiya Field gray, allowing a little of the black to show through. The black stripes were sprayed free hand with Tamiya flat black, again. After an oil wash of raw umber and black, the model was drybrushed with Humbrol khaki drab #72 and a little white. The tactical markings are AA dry transfers and the ID code and BIG AL came from Woodland Scenics dry transfers.

After a good coat of dead flat, the under carriage was dusted with a thin Tamiya desert yellow. The spade was muddied up with Hudson & Allen mud and the mud was dusted with a sand colored pastel to give a dried out look.

This model was a real blast. All of the stowage you see in the baskets comes with the kit. It would be no problem to build this kit as either a Australian Vietnam vehicle or an Israeli one. I would strongly recommend this kit or any of AA's Centurion series and wish them and you all the best in the new millennium. CHEERS.

—Nick Vanston

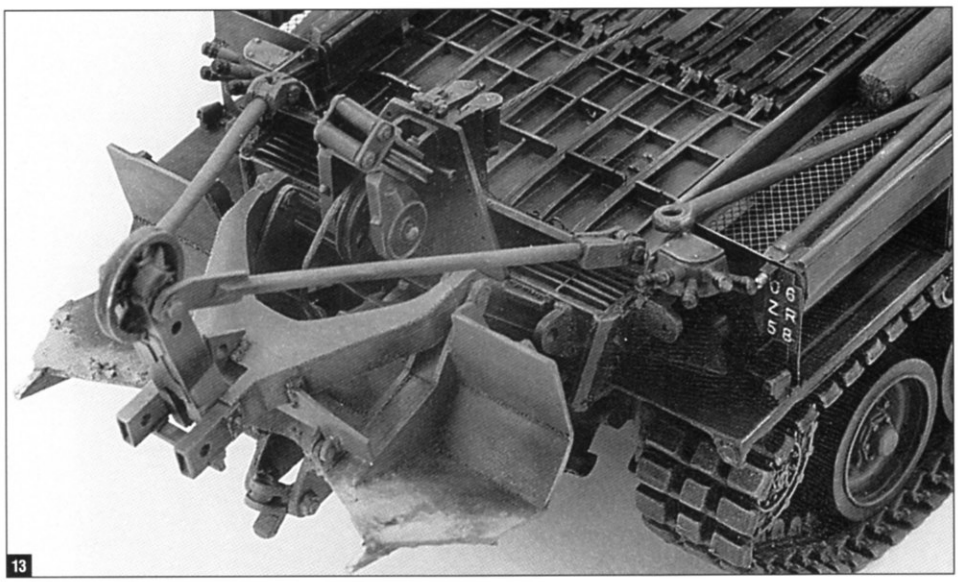
easier. In this step, you will have to add a bunch of tiny P/E handles, part E1. Removing them from the fret was simplified, due to AA thoughtfully attaching them on the ends and not in the middle and, if you cut them close, you will not have to break out the file. Thank you, guys.

The front end of this model is very busy and will pose no obstacles, if you dry run the placement of the pieces so everything fits correctly. The snatch blocks were sub assembled and their mounting blocks were attached, part CT. Once I was sure of the positioning the snatch blocks and their retaining brackets were attached with the rest of the details. The headlights were drilled out for MV Lenses #159. AA provides a cool P/E driver's wind screen and a piece of clear plastic for the glass. I also left this off because most photos I've seen of the ARV MK-II did not have a wind screen.

Watch out when adding the vise assembly, as it is very easy to get it crooked.

If you like baskets, you will love this kit. The stowage baskets on the rear engine deck, to me, were the highlight of this kit. I would advise investing in a small machinist's vise to assist in the bending of the baskets because they are very long. The vise will probably set you back around $20 and it comes in handy. Before the baskets can be installed, you will have to add the mufflers and bulkheads. It goes something like this. Add the rear most bulkhead first, part E27, so the muffler can fit through the hole. Now the mufflers and their heat shields can be added. With the mufflers in place, add the center bulkhead, part E5, the tool box, part M, then, finally, the front bulkhead, part E4. A dry run is a good idea here since you want to make sure that all of this ends up the same length as the basket. There are locating marks, so it's pretty hard to screw up. Attach and detail the basket, then sit back and enjoy the view.

The rear earth spade can be made to move by opening the pivot points and pressing plastic rod into the pivots. The thing actually works! This is a nice feature in that you can position the spade so you're not locked in right from the start. The fair lead, on the other hand, will have to be positioned how you will want the model displayed. The instructions illustrate the various positions quite clearly. I opted for the traveling position. I left the spade off to make painting the rear more accessible. AA provided two types of cable, one length for the winch, which is the thinner, and one length for the tow cables, which is thicker. AA provides enough to do all kinds of crazy stuff. I just cabled from the winch to the fair lead to give it the going down the road look. Consult your references.



Painting off into the sunset

The model was primed and painted flat black. AA provides a nice set of P/E side skirts, but I decided to leave her skirts off to show her goodies underneath. It

MMiR RECCE

Accurate Armour Centurion ARV MkII. Kit number K82. Kit graciously provided by the manufacturer (hopefully Nick didn't embarrass you too much). Suggested retail price £89.99 in the UK and £76.59 for export (about $122.00).

References

Modern Combat Vehicles No. 2 'Centurion' by Simon Dunstan. Recommended by the master himself, it is, unfortunately, now out of print, but well worth looking out for.

Centurion in Action, Squadron/Signal Publications Armor No. 13 by Steven Turnbridge, Squadron/Signal Publications 1976. ISBN 0 89747 046 X. The inexpensive staple, if you're into modern Brit armor. A couple of good photos of the Mk II and a color plate of an Aussie vehicle from Vietnam.

The Centurion Tank in Battle by Simon Dustan. Osprey-Vanguard 22, Osprey Publishing Ltd., 1981. ISBN 0 850453 984. No photos, but contains a really interesting color plate of an Australian vehicle with the unique over head tarp.

Merry Merkava

THE NEW ACADEMY KIT GETS THE MMiR TREATMENT

The latest Merkava, the MkIII, is pretty much a complete redesign. It now has a new main gun, larger hull, larger turret, new suspension, improved mobility, and the addition of modular armor and improved technology. The MkIII's 120mm main gun is Israeli built and capable of using ammo from both the M1A1 and Leopard 2.

In keeping with the need for crew and ammo protection, the engine and drive train are still mounted up front as in previous Merkavas. The hull has been lengthened close to eighteen inches and the turret nine.

The MkIII has been upgraded from a 900hp engine, to a 1200hp Teledyne Continental 12-cycle air-cooled, turbo-charged diesel power pack (agh-agh-agh, as Tim the Tool Man so eloquently puts it). Improvements in the transmission and a new suspension have been incorporated into the MkIII, as well. It still retains the special reinforced forged steel road wheels at the forward station.

The tracks were widened on the MkIII, which I thought was surely due to the added weight of the newer armor and added size, but actually, the MkIII is one ton lighter then previous Marks.

Inside there are many technological improvements. NBC protection is now provided, along with an advanced threat warning system. This system warns of being locked-on by a laser beam from anti-tank teams, helicopters or tanks. Electromagnetic warning sensors are mounted at the rear corners of the turret and on the mantlet to provide 360-degree protection.

The MkIII now has day/night sighting capability, as well as gunner and commander line of sight stabilization, which means this tank can shoot and scoot at the same time. The Merkava's automatic target tracking allows the tank to aim at the target using image data from the day or night sights.

The previous and sometimes dangerous hydraulic turret control system has been dropped and replaced with electronic turret control.

Modular armor protection is one of the main improvements in the MkIII. The passive armor is classified top secret, as is most modern armor, so not much is known about its make-up or spacing. The modules are bolted on so they can be replaced if damaged in the field or in the case of an upgrade. This saves a great deal of time and gets the tank back on the battlefield much faster.

The Kit

I opened the well-packaged box to find a carry over of the separate rubber tired road wheels of past Academy Merkava's. Also contained in this kit is the ball & chain armor from the previous Merkava Mk II (Limited Edition) kit. A piece of nylon string is provided for the tow cable and markings for two different tanks make up the decal sheet. The remaining pieces were very nicely represented in plastic and the instruction sheet looked decent and inviting.

As it turned out, there is quite a bit to add to this kit. I set out to put on what I could.

This may sound confusing but here goes. I added Corée's MkIII update set, along with their MkIIIB update set to this kit. These sets are sold separately, but are also packaged in the same box under kit number CE-3512. Now... the main detail set contains resin, photo-etch, copper chain and brass balls, machine guns, machine gun mounts, engine grate, improved first station road wheels, Israeli jerry can, improved side skirt armor, small gauge wire and a cross-wind sensor. These pieces are nicely detailed and are of very good quality. There is minimal clean up and there was only one very small pin hole in the top of the cross-wind sensor.

The instruction sheet has no text, but does have very nice color photos and a diagram of the MG mount. You are on your own building up the chain and ball armor though, no text or diagram is given on this detail. I just ran a small piece of wire, provided by Corée, through each ball and super glued the end. Then I wrapped the other end of the wire around the first link in the chain.

The Merkava MkIIIB set includes front turret top armor plates and a replacement mortar. There was no instruction sheet for the MkIIIB conversion; just one photo, which I suppose was probably enough. I hope I put it on correctly. Have fun finding references for those pieces.

Additionally, I came armed with the Eduard photo-etch set. Most of the parts in this set are very good, although some I consider oversize or impractical. I picked what I felt was best between this set and Corée's. Eduard did have many pieces that were not offered by Corée.

Lastly, I threw in a set of the Friulmodellismo pinned metal tracks and they are very nice, indeed.

Let's Go

First off, I should say that Israel builds Merkava's in blocks and from what I can tell, the Academy kit is a MkIII, block III or later. This I discerned from reference photos in the MO Special listed in RECCE at the end of this article.

To get started, I look for parts that need to have

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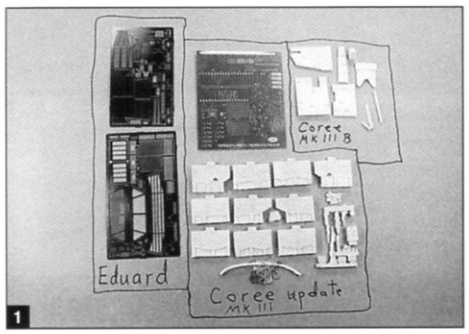

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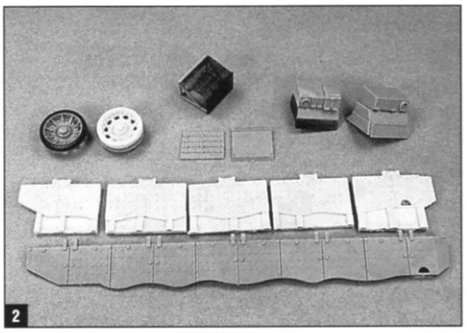
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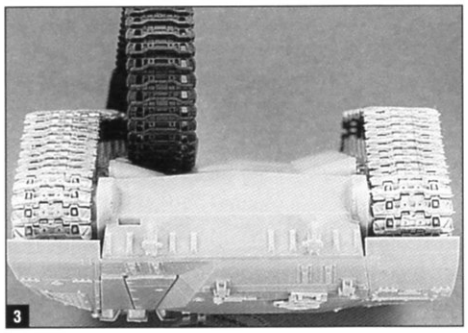
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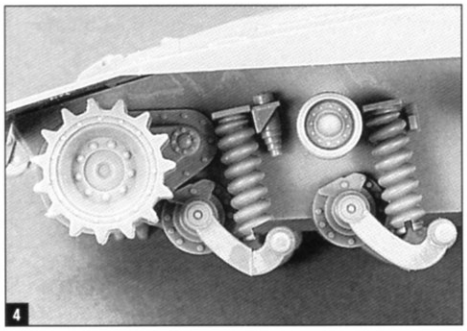
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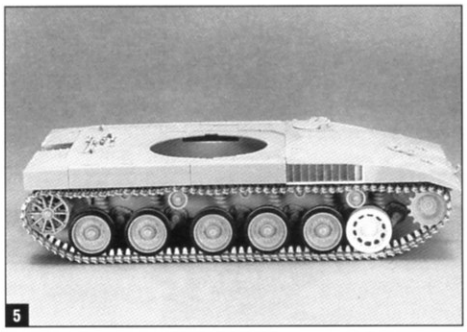
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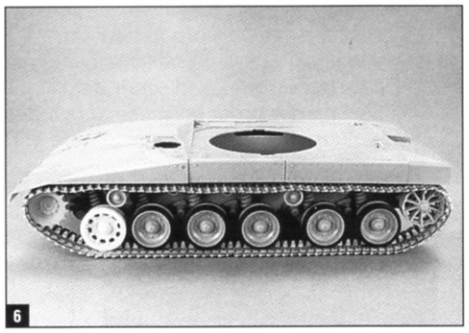
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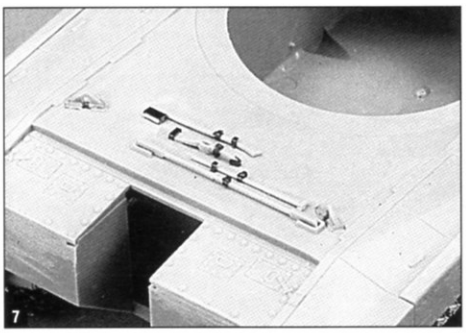
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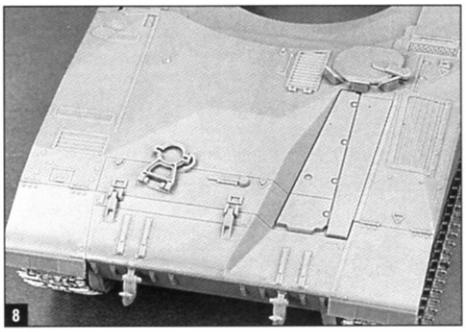
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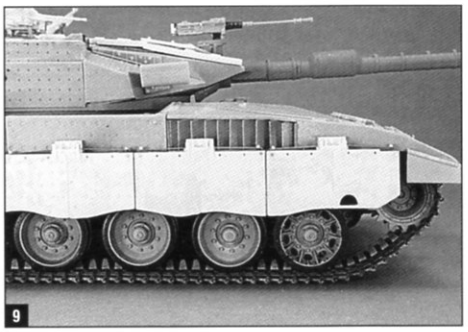
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seams filled. This way, they can be drying while I work on the rest of the kit. This usually pertains to the gun barrel, hull halves, turret halves, gas cans, an ammo can or two, and the smoke dischargers. It is my opinion that the smoke dischargers are somewhat oversize. Time permitting, I would scratch build new ones. There is a prominent weld seam along the side of the dischargers, which would make a nice detail to add.

I built the hull, turret, gun barrel, machine guns, tracks, side skirts, rear stowage bins and fender extensions separately and kept them off until the lower hull and tracks were assembled, painted and weathered. I usually finish the lower hull first on a kit that has side skirt armor, then I use aluminum foil to mask off the lower hull when I paint the upper surfaces.

The hull goes together very well, with a small seam at the front and rear. A little trimming off of the mounting post at the left front corner of the lower hull will help bring a small gap together there. Make sure the side armor on the upper hull is good and flush so the side skirt armor will lie flat on the hull side. I had trouble getting a good fit on part no. E23.

The suspension is new on this kit and the old parts from the Mk II are included, as well. No surprises here, just a lot of mold seams to clean on a multitude of coil springs. Be sure to check the alignment of the sprocket halves, as they can shift on you. I used a drill bit across the teeth to check mine.

Some MkIII's had the road wheels drilled in five places near the outer edge. This was done to keep mud from building up on the inner side of the road wheel. Something about these road wheels doesn't look quite right. The rubber tires appear to be thicker than in photos I have seen.

I assembled the tracks and added them to the hull for in-progress photos. I later removed them for paint and weathering.

The first station road wheels were way too close to the next set of wheels, almost touching, actually. I sectioned the wheel mount by cutting about 1/8 of an inch out to move the road wheel further forward away from the second wheel. Photos I have seen show the wheels very close at times, but not that close. This was just eyeballed though, as I don't have a good enough set of drawings to compare it with.

I made up the rear stowage baskets with Eduard photo-etch pieces. I felt Eduard's detail made it easier to assemble, but was not quite as accurate as the Corée parts. A point of interest on the stowage baskets is that they collapse from underneath on the real vehicle. This is helpful when going over rough terrain. The contents of these baskets can be remotely dumped, if needed, as well.

I used the rear hull extensions from the kit, as I did not think the Eduard photo-etch parts made that much of an improvement. I did use the mudguards from Eduard though, as they were nice and thin. I had them mounted backward with the mud flap on the outside, but caught it before I painted it. Fortunately, they were not glued on that well. The pioneer tools were mounted with Eduard parts, as Corée did not include any photo-etch for this detail. I drilled out the handle hole for the pickax (mattock) and trimmed the spike and sharpened the blade to give it a little character.

I tried to replace the kit supplied spare track links at the bottom rear of the lower hull with two extra Friul links, but they were too wide. This immediately made me suspicious that the track tensioning devices were to wide and out of scale. I gave in and used the kit links.

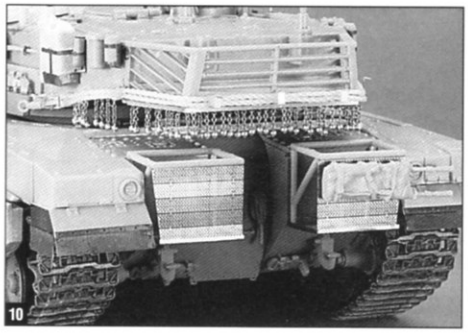
The Turret

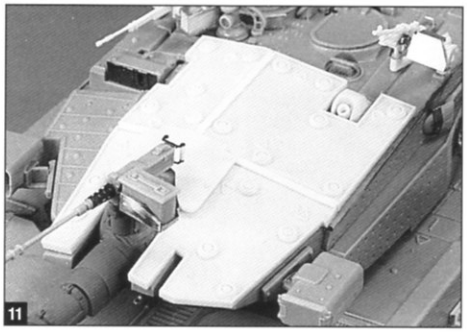
The turret halves went together pretty well, although the turret bustle rack needed some attention. Once I got it to fit correctly, I ran very hot water over it to help relieve the stress, just in case it tried to come apart later on. The Eduard photo-etch rack did not appear to be much of an improvement, so I stuck with the kit part. It is actually way too thick, but easier to mate up with the Corée parts.

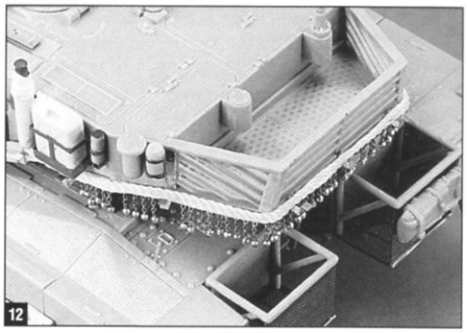
Eduard parts were used on the pioneer tools, fire extinguisher brackets, sensor mounts and jerry can bracket. The jerry can supplied with the Corée set had a U.S. style mounting bracket, instead of the Israeli bracket shown on the box top and instructions. I trimmed off what I did not need and used the Eduard photo-etch bracket.

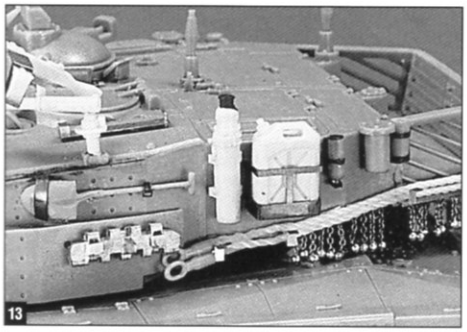
The spare track link on the left side of the turret was replaced with a Friul link and secured with styrene flat stock and resin bolt heads from my supply. This link was also moved a bit lower and to the rear, which I felt was more accurate.

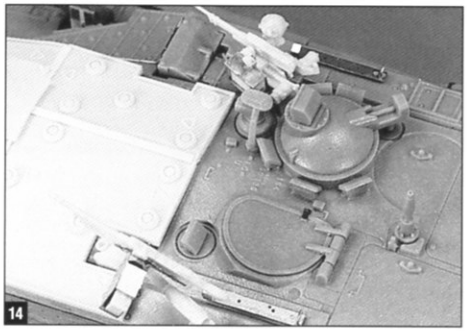
I wanted to mount the barrel pointing to the sky, with the turret turned sideways, like you see in Desert Storm M1A1's, but the MkIIIB up-armor set could not be fitted unless it was pointed quite low. You will need to carve off the turret ventilator and

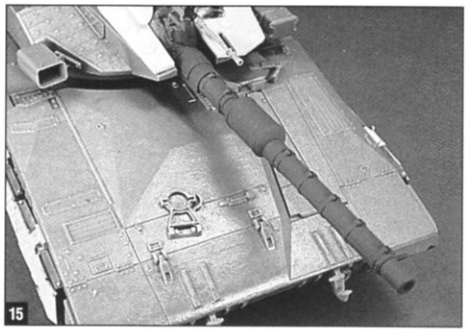




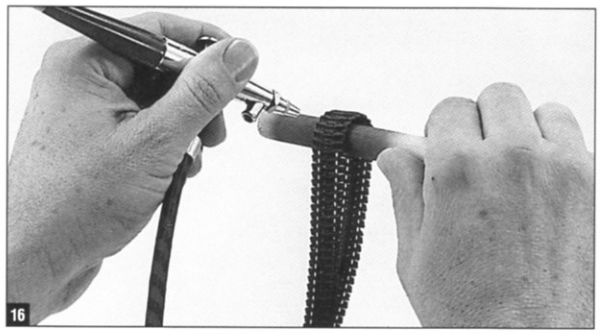








1. All the various part sets laid out. 2. Here, a few of the plastic parts are compared with their replacements. 3. There were only a few gaps to fill on this kit. This shows the gap at the final drive housings and the front hull. 4. It's necessary to section one of the wheel mounts to make room between the first and second road wheels. 5, 6. Right and left views of the completed suspension and tracks. 7. I reshaped and detailed the rear tools. 8. The bare front hull. 9. The Corée side skirts and exhaust vent installed. 10. More Eduard photo-etched here on the stowage bins and mud flaps. I have the fender extensions on opposite sides. Fortunately, I caught this before I painted it. 11. The light resin is from the MkIIIB update set. The lighter strips are styrene, which is easier to work with compared to the resin parts. 12. Eduard had a nice etched turret basket, but it would have made mounting the ball and chain armor more difficult. 13. More of the Eduard etch, Corée bits and the Friul spare link. 14. The machine guns come with the main Corée update set. 15. This is as far as the main gun elevates. 16. In the past, it was tricky to get a coat of paint into the joints of the track links. They would often show a bright metal spot in between once they were installed. This method works well, as I just keep turning the dowel as I paint.



a few other turret top protrusions to get the armor to fit tight to the turret, assuming that this is how it is supposed to mount. No instructions were provided and I could not find any references on this detail. I used styrene flat stock between these armor plates, instead of the fragile resin pieces in the update set.

I felt the periscope covers were oversize, compared to reference photos I have. I had to trim mine a touch to get them to fit on a couple of the scopes.

Part no. D3 on the right side of the turret should have its upper edge angle down to the front with the turret roof, the kit part is parallel to the ground. Something is also not right about the shape of the commander's hatch. Keep an eye out for this detail as well.

The kit tow cable mount on the right side of the turret was too far forward. I filled the location holes with styrene rod and used the Corée mount located farther to the rear. I felt the tow cables were somewhat oversize.

The Corée 7.62 mg's are nicely done. A few parts were very fragile like part no. 23 on the commander's gun. It stayed on right up until the last dry brush was drybrushed and then flew off into the abyss never to be found again, just like photo-etch part no. E 25 on the hull.

I added a clear MV Lens to the commander's MG spotlight, although two of the photos I have seen of this light appear to be blue in color.

I did a modest upgrade to the .50 cal MG with some of Eduard's photo-etch parts.

Eduard had a nice photo-etch shutter for the front of the gunner's armored sight block, so I replaced the kit part with theirs.

Oh yes... the chain and balls. Have fun here, it took me a better part of a day to get all my balls up on the turret bustle (and I think we all known how painful that can be). This was a tremendous improvement over the kit supplied pot-metal balls and chain but I felt they had gaps in their placement that could have been more accurate. If I would do it again, I think I would drill out the bustle and add fine gauge wire to mount each of the chains to instead of using the Corée photo-etch mounts. This way I would have more control over the placement of the chains.

Don't sweat it if you loose a few balls, they give you plenty extra. I ended up with 8 inches of chain and 5 inches of balls left over when I was done.

There is a very obvious non-skid coating on the whole top surface of the tank, I tried to represent this with liquid cement brushed over the upper surfaces and stippled with a stiff brush. It worked out pretty well, although in hindsight I think I would have let the cement stay on longer to get a more aggressive texture. I was afraid of going too far though, which sometimes happens with this technique.

The Paint

I felt Israeli armor is more olive drab than sand after conferring with some of my internet Chums that have actually seen armor in Israel. This was also reinforced after looking at Steve Zaloga's color plates in the Concord book: Tank Battles of the Mid-East Wars no 2. This led me on a rather hasty experiment to find a suitable color, as this build was nearing the deadline. At any rate, I began my mix with Floquil Military Colors Israeli Khaki and added increased amounts of the same company's Olive Drab FS no. 34087. I don't know how it will come out in print, but I was quite satisfied with the final color. I was surprised to find that Tamiya Khaki (XF49) was a close match to the color I came up with. I strayed from my usual oil wash and used acrylics to save time. It came out okay, but I love my oils. Once a wash was applied, I drybrushed with the original mixture to bring it back to the correct base color. Highlights were brought out with white added to the base color and wear patterns where the crew would walk were done with graphite powder from a no.2 pencil.

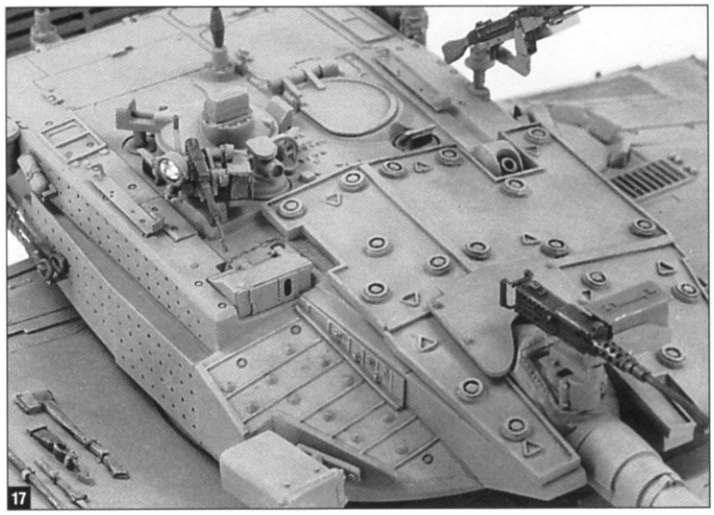
Paint the tracks

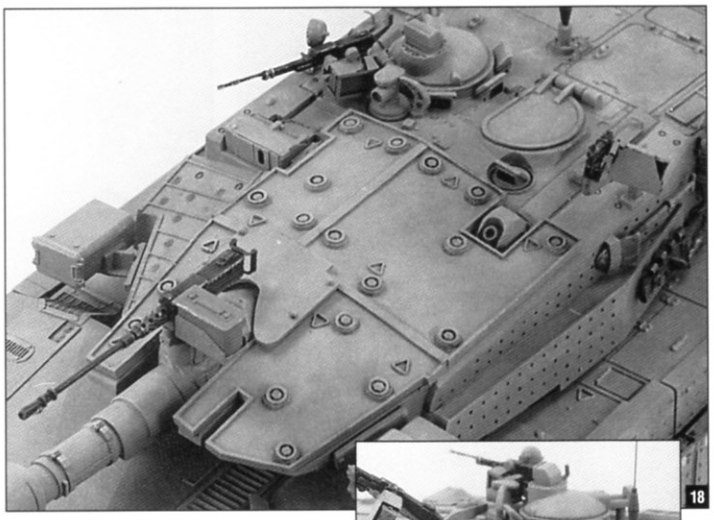
It has been tricky getting paint into the pin joints of the metal track sets. I always get surprised when I put the tracks on and the ends by the idler and sprocket show a shiny spot where the paint did not reach. I now use a wooden dowel to rotate the assembled tracks while spraying paint into the joints. This seems to work pretty well.

The tracks were painted Model Master field drab first and then washed with a mix of raw umber and flat black. Once this was dry, I drybrushed them with Model Master Euro I gray. This was followed by a dry brushing of raw umber and Testors silver, adding more silver as I went along. A final light drybrushing of Model Master bright silver finished them off. A wear pattern was also painted in where the road wheels contact the track. The guide teeth and sprocket teeth were lightly drybrushed Testors silver.

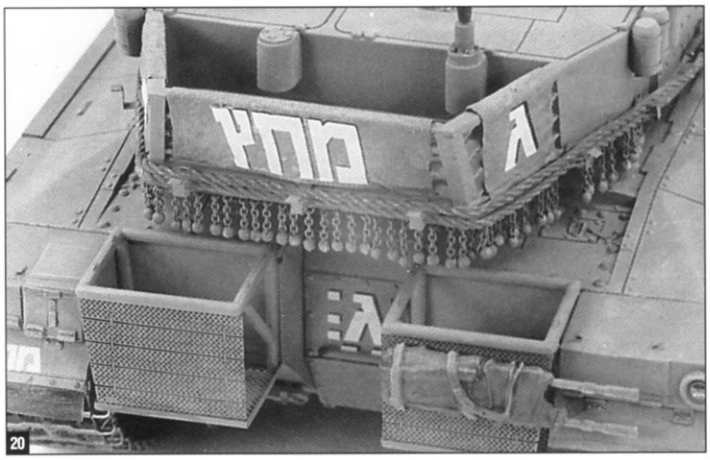
The Decals

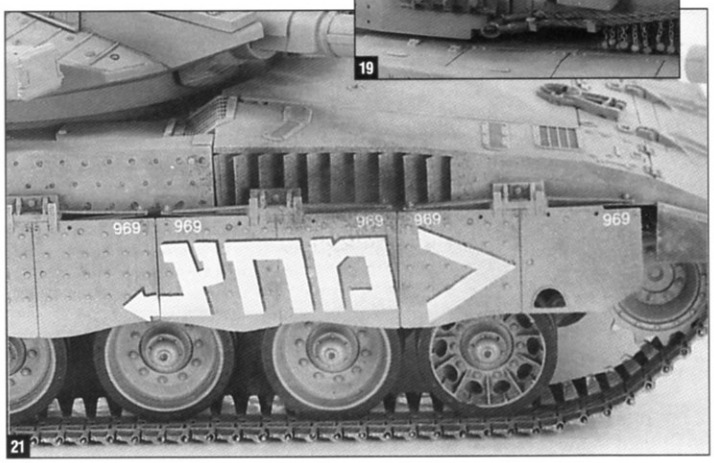
Who could resist using the wild markings





17, 18. A considerable amount of work went into the turret and I hope it shows. The turret mounted MG's are among the nicer parts provided in the Corée sets. I added an MV lens to the commander's MG spotlight, visible in shot 17. 19 The left side of the turret. 20. The Corée ball and chain armor took the better part of the day to build, but it was a tremendous improvement over the kit supplied parts. The folded canvas covers for the turret basket were made from tissue soaked in Tamiya paint. 21. The hebrew work "Mahatz," or strike, made an attractive marking. None of the decals went down flat until I brought out the Solvaset.





supplied in the kit of the Barak Brigade's "Mahatz" or (Strike) battalion. I did have one frightening experience with these buggers though. I was finishing up this kit and the word (Strike) on the side armor, wrinkled up like the face of my former boss (who I still think was weaned on a pickle). I started off using Micro Sol and it would not bring the decal down flat to the surface. After wrestling and sweating with these two decals until the wee hours of the morning, I brought the Solvaset out and finally got them to lie flat. I thought for sure they would both end up melted and torn the way things were going. Whew!

The canvas panels where the tactical markings go on the bustle were made with tissue paper folded over one time and soaked in Tamiya Khaki paint before being applied. A few coats of Tamiya gloss were applied before the decals were added. This is were I noticed how close Tamiya Khaki is to my custom mix of paint.

These decals are somewhat sticky and tough to move around, so try to get them where you want them from the start. The rest of the decals went on without a hitch. One thing I forgot to do in my haste though, is paint the white line down the topside of the barrel and I also see I missed the commander's hatch periscope. Slow down young man slow down!

Conclusion

As I look back at my research and build, I see things that question the accuracy of this kit. Some of the turret angles, like the area at the front of part D3, should slope down at the front, along with the turret roof. The area between the mantlet and flash suppresser on the barrel is suspicious, as are the oversize smoke dischargers, the kit supplied side armor and road wheels. I have no accurate drawings to measure these areas with, so these are just observations of mine from reference photos.

I was also disappointed that there was not much extra stuff included in this kit. Some of Academy's previous armor kits have been stuffed with extras. It sure would have been nice if, at least, a figure or two were included.

Out of the box, the kit is easy to build, impressive, nicely detailed but not very accurate. If you want an accurate kit that is show worthy, you will need a lot more than the very nice Corée update sets. Enjoy!

—Barry Beaudry

MMiR RECCE

Academy Merkava MkIII Israeli Main Battle Tank. Kit number 1391. Suggested retail price $32.00. Kit graciously provided by the manufacturer.

Eduard Model Accessories Academy Merkava MkIII photo-etch set. Kit number 35 243. Suggested retail price $19.99. Kit graciously provided by the manufacturer.

Corée Productions Merkava MkIII/MkIIIB Super Detail Set. Kit number CE-3512. This set number contains both the detail set, as well as the MkIIIB set. Suggested retail price $49.98. Kits graciously provided by Corée's U.S. import agent, Squadron Mail Order.

Friulmodellismo workable metal track links. ATL-49, Merkava MkIII. Suggested retail price $39.95. Kit graciously provided by Friul's U.S. import agent, Chesapeake Model Designs.

References

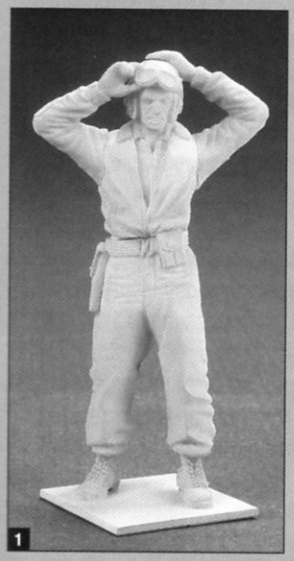
Warmachines No 11, Merkava Mk2/Mk3, by Michael Mass, VLS Corporation, 1992. If you are looking for one good color photo reference, this is a good one.

Tank Battles of The Mid-East Wars, by Steven J. Zaloga, Concord Publications Company 1998. ISBN:962-361-613-9. Don't miss this one. Info on all types of Israeli AFV's from 1973 to present. Plus color plates showing the dark khaki/olive drab color of modern Israeli armor.

Museum Ordnance Special Number 12, Merkava Mk II and MkIII Israeli Main Battle Tank, by Shlomo Yoffe, Darlington Productions, Inc. 1996. This is an excellent reference which shows some of the differences between the MkIII, block II and block III.

Mini-Men

A PEEK AT WHAT'S NEW ON THE FIGURE FRONT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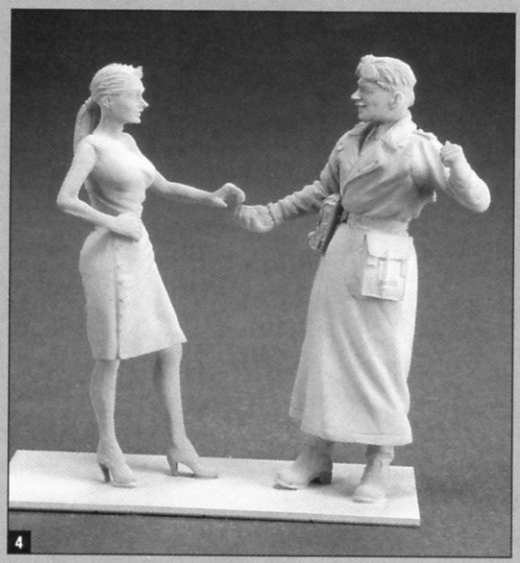
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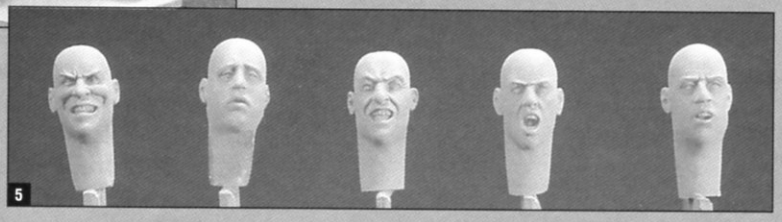
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Corée

New to the MMiR line-up is this hot line from Korea, with some of the freshest figures you're gonna find anywhere.

CE0055, U.S. Tank Crew WWII (1), is a single American tanker. What's neat about him is that he's adjusting his helmet and goggles. The jacket and trousers are dead-on and the web belt with .45 and ammo pouch are perfect. He could be getting on, getting off, or standing in the cupola.

CE0056, Memphis Belle USAF Crew WWII (2), is without a doubt one of the best figure sets to ever come down the pike. Here's a box of ten flyboys either returning or heading down the tarmac, stopping to have their picture taken. It appears that the pose is inspired by a shot that graced the cover of After the Battle magazine, although the sculptor has altered a few of the poses to his own design. He also dropped the pooch shown in the photo. Extraordinary might be the word for this set. The entire ensemble is specifically designed to fit in Tamiya's newer Willys Jeep and we just had to whip one together so you could get the full effect. There's a whole range of uniforms and headgear worn here. Especially pleasing is the fact that the figures were sculpted to fit the Jeep—unlike some figures, where the guys look like giants with sawed off legs, here's a group that looks just right for the trusty Willys. And did we mention you get ten figures in the set? Ten! Now, if someone will just produce a 1/35 B-17, we'll be all set.

CE0058, German Fallschirmjager (Ukraine 1943) (3), brings a very well executed paratrooper in the winter quilted suit. He's simply geared, with only a belt, MP40 and ammo pouches. It's a fine pose, with the figure fiddling around with one of the pouches. Think brazier scene with a recon team heading out.

CE0059, Do You Wanna Ride? (4), might just as well have been called Do You Wanna Dance? A German dispatch rider in rubberized overcoat holds the hand of a young maiden, offering her a lift on his bike. The female is very well rendered (so to speak) and seems to be contemplating his offer with a sly grin. Or, they're about to break into a jitterbug. Nice pair.

Hornet

We've long sung the praises of owner/sculptor Roger Saunders and these three latest head sets have once again raised the bar in the figure realm. Using a Hornet head, you can take even the most

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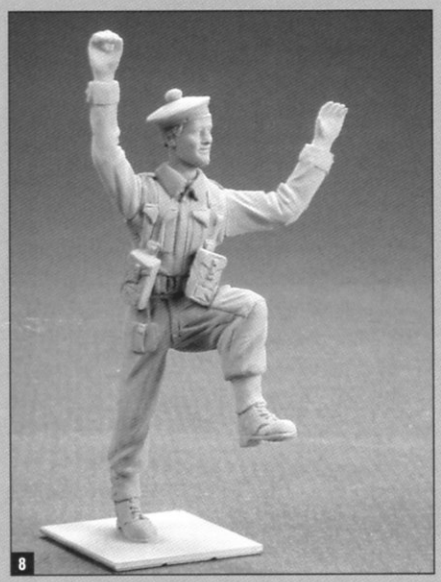
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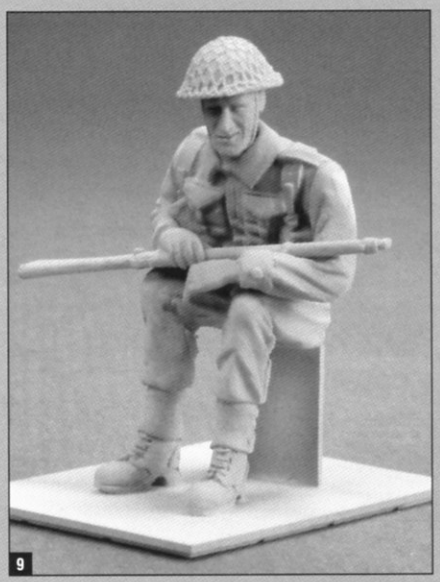
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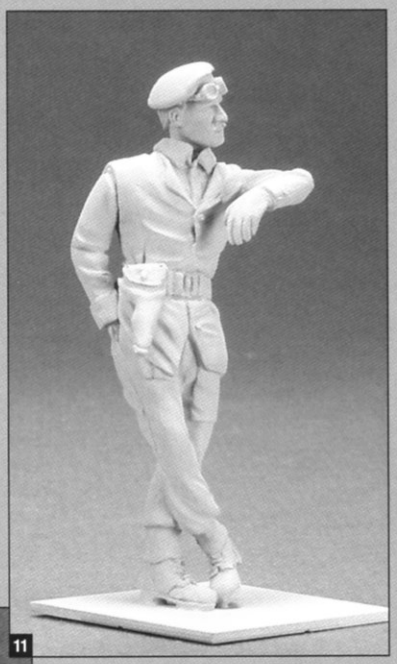
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mundane plastic figure and make him an animated masterpiece. Roger is always thinking of clever head variations, the kind that make you wonder "How come nobody ever did these before?" I mean, just LOOK at these heads! **HH14, 5 different European heads with open mouths including shouting, snarling (5)** breaks open more conversion possibilities with several action poses springing to mind. **HH15, 5 different heads, smoking (6)** (you add the butts or stogies) is another thought provoking one. Don't forget, lighting up was practically the combat grunt's second favorite pastime. Heck, Lucky Strikes were passed out like candy in WW2. It strikes us that this set would make an instant dio. Slap these babies on the subject bodies of your choice and presto—smoke 'em, if ya got 'em! **HH16, 5 different bald heads (7)**, is yet another in the very long line of "plain" replacement head sets. This is five more different faces to populate your miniature scenes. As usual, all of the most recent Hornet head sets are sculpted bald, so that they can be modified with your personal hair style or headgear. Roger, we love you, man.

Resicast

Also new to our line-up is this line from Belgium, specializing specifically in WWII soldiers of the UK. Good idea. There's a smattering of GI-types in the line, but here's what's up this time around.

35516, UK soldier climbing onto vehicle (8), has a Tommy in battle blouse and bonnet reaching up onto your Cromwell, Bedford truck, Universal Carrier, or vehicle of choice (this and the next three figs are part of a larger set meant for the Resicast Kangaroo kit). It's an interesting pose and there aren't nearly enough of these climbing guys on the market.

35518, UK soldier seated (9) and **35519, UK soldier seated (crossed legs) (10)**, brings us two different seated chaps. The first man cradles an Enfield across his lap and the second is perhaps the only figure ever done with his legs crossed at the knee. These are fine go anywhere figures, both wearing steel helmets with camo nets and enjoying the day.

35520, UK soldier tank driver at ease (11), is a jaunty officer type with one elbow resting on your latest creation. He sports a beret and goggles, along with a holstered Webley. An interesting note is that the package label for this figure is reversed 180 degrees—but you'll probably figure out how he goes together regardless.

35526, Wounded soldiers (12), is a pair of wounded Brits in the reclining position. The package label indicates that the flat piece beneath them is to be removed, but we rather fancied them as stretchers or bits of wood on whence these fellows were transported. So, we left 'em on. One has a sling and head bandage and is covered with a blanket and his cohort enjoys a smoke and a leg wound. These are good 'uns and virtually no assembly is required.

There are also two head sets from Resicast this time around. **35525 is UK heads (Para) (13)** and **35527 is UK heads (Helmets) (14)**. Each seat is comprised of five heads. The para set has four troopers in steel helmets, plus one man in beret. The helmet types are three with camo net and two without, including that charming head from 35519. More good stuff and we look forward to future releases.

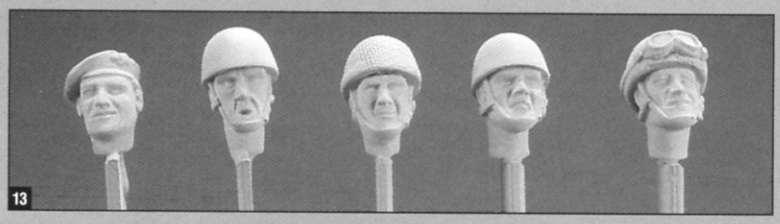
Royal Model

We've been looking forward to some samples from these guys for quite some time. The Royal line is one of the most under rated in the world and many of their pieces are super sweet and are highly versatile. Here's a run-down on what we've nabbed lately.

178, German tanker "cranking up" WWII (15), is a tanker type really laying into a hand crank. He's got his sleeves rolled up and looks suitably intense for the task at hand. Both fists are molded onto the crank handle and an extra cover for the crank port is thoughtfully included.

183, German infantry with jack (16), features a German driver cranking up to change a flat and is one of our all-time favorites. He wears the Feldmütze with Wehrmacht insignia on his collar and cap and a Wehrmacht belt buckle—but there's an SS eagle on his left sleeve. Just carve it off, if you don't want it. We just love that kind of stuff—makes the figure more multi-dimensional. This is a lightweight, wheeled vehicle type jack and he's the kind of figure an entire scene can be built around. We've already started on ours. Give us your Steyr, your Horch, your huddled Kruppes...

188, Gefreiter, Signals 1941 (17), is again the kind of figure you can build an entire diorama around. Here's a German type listening intently on a field phone. One hand is molded to the receiver and the other is molded onto the chassis of the phone. Included is a wooden (actually resin) table with tools, maps and papers strewn across the top. He's a Wehrmacht type and also sports the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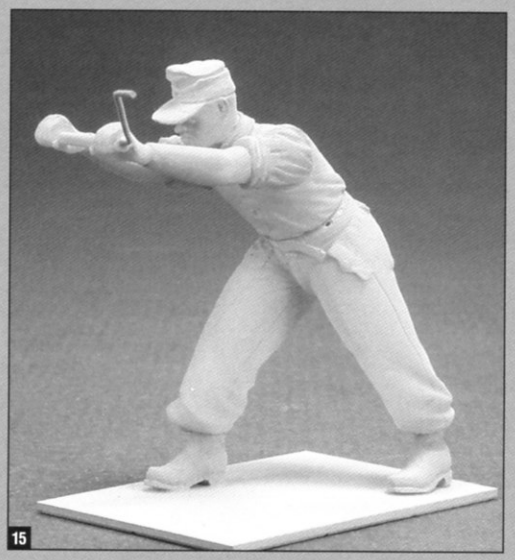
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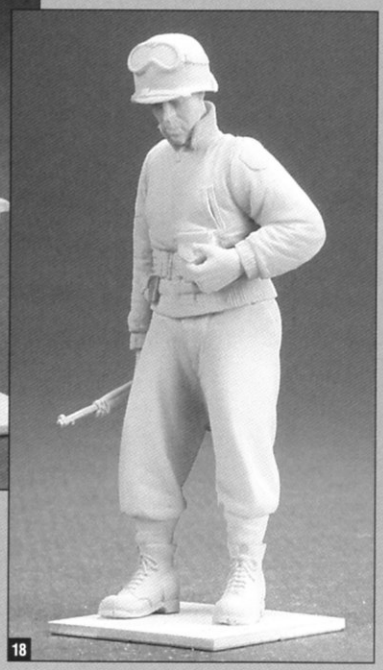
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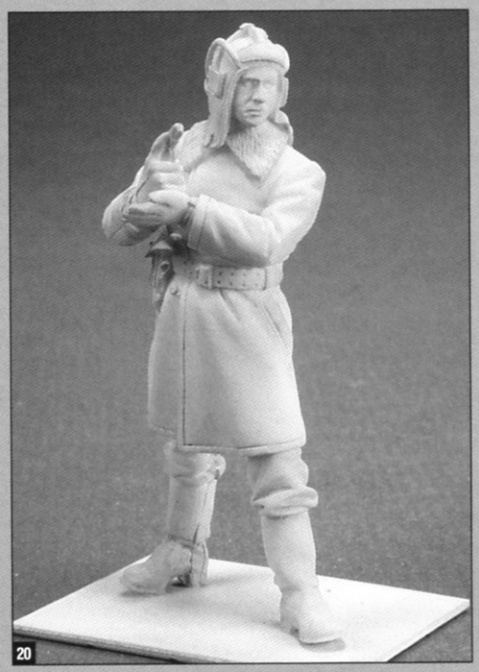
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gorget around his neck. Quite frankly, it's a stunner.

190, US infantry, 36th Engineer Combat Regiment (18), is a big title for a go-anywhere GI and one of the best grunts ever. He's got goggles on his steel pot, a carbine in his right hand and his left hand is molded to his torso, where it's fiddlin' with an ammo pouch. He wears the standard tanker's jacket and with the goggles on his helmet, he just oozes motorized. He's just right. Pardon us while we take a moment.

196, Waffen SS Ardennes (19), features a well-done Teutonic Knight in late pattern camo smock out for a stroll. He's got a camo cover on his helmet and is fully geared up, to include a Kar98k rifle over his shoulder and a potato masher in his right boot. And since you can never have too many walkin' dudes, we like 'im.

Warriors

It's more singles, doubles, triples and even a foursome this time around.

35277, Russian Tanker—Winter Dress (20), is a variation on the earlier 35261. This time, he wears the sheepskin coat with the tanker's cap and the T33 pistol is getting a new magazine slapped in. He's a tough looking hombre ready to mount up on your Eastern Front scenes. He might even look god on top of a hull or a hatch. Just the thing to set off your next commie tank.

35278, Universal G.I. Driver WWII (21), brings back the driver from 35178, the 3-man Tamiya truck crew, only this time he's flying solo. With a nip and a tuck here and there, he can rev up your Dragon Wagon or the old line of Italeri U.S. trucks. We've been needing this guy for a long time.

35280, German Defenders at Stalingrad (22), has two very cold looking dudes about to stir it up. The Wehrmacht officer wears a long sheepskin coat and checks his watch as he prepares to fire off a flare pistol. The trooper next to him is braced for action, with a long overcoat, confiscated PPsH and a white sheet wrapped around him for camouflage. An excellent pair for an instant vignette, or they could be expanded into an entire scene—maybe with a couple of Russians right around the corner?

35281, US Marine 1943-45 (23), brings back the standing figure from 35270, the 3-man USMC tank crew. He wears the tanker helmet and 1941 fatigues in OD or USMC camo and has a Thompson braced on his hip. His belt gear is all molded on—holster, ammo pouch, binocular case

and first aid pouch in the back. We liked him once and we like him again. Semper Fi.

35282, Waffen SS Mobelwagen Crew (24), is a brand spankin' new 3-man crew for Tamiya's brand spankin' new Mobelwagen. The gunner is sculpted to fit right in and to make sure he fits, the Tamiya seat is molded right onto his ass. The crouching loader cradles a full clip of ammo and he includes a separately cast jacket to throw on the shield. The third figure is a standing commander type, pretty much overseeing the operation (what else?). Tamiya has a popular kit and this has already proven to be a popular set to go right along with it.

Quick—how many PLO figures do you have stashed away? Here's one. **35286, PLO Guerrilla, 1967-82 (25)**. Finally gives us a bad guy for our Israelis to blow away. He's suitably attired in civvies and his burnoose is pulled down around his face, terrorist style. He brandishes a weapon rarely seen in scale, the Russian RPK assault rifle. This is a cousin of the familiar AK series and it's unusual in that it accommodates both a bipod and a 75-round spring loaded drum magazine. It was normally issued to Soviet assault troops and it's a chilling addition to this piece.

35287, British Desert Rat (26), has one of Monty's boys stepping up with his Enfield. He's just right in shorts, high socks and field pack and we like the mustache. This is another single figure that would set off an armor piece well. Imagine him gazing at a busted up Panzer III.

35288, Waffen SS Panther Crew in U-boat Leathers (27), has two half-figures for the front hatches plus two full figures for topside. The driver puffs on a butt, while the radio operator is offering everyone a drink from his open canteen. Both the standing figures hold binoculars and are a tough lookin' pair. We like these guys and we like 'em a lot.

35289, SS Tanker Pointing (28), features a single figure with one leg up pointing at anything and everything. We played around with this guy and discovered that his pointing arm can be positioned in several different directions, depending on where you're using him. He wears the ankle boots and variation on the tanker's tunic, introduced in mid-1942 with the large external pocket.

Wolf

It's all bad guys this time around for the boys from England.

If you've been having trouble locating

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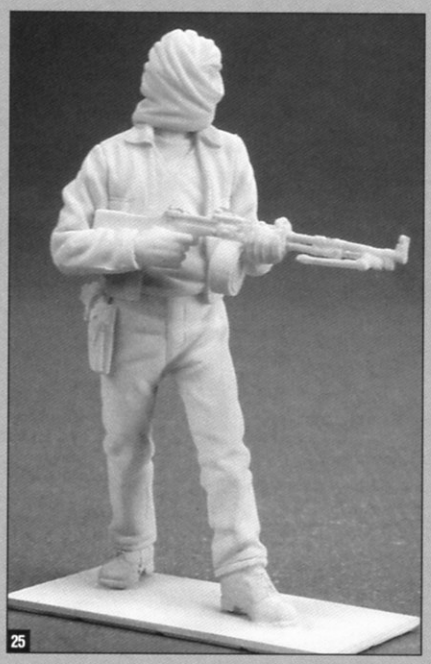
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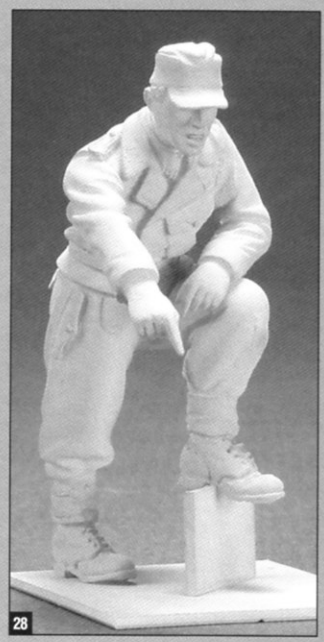
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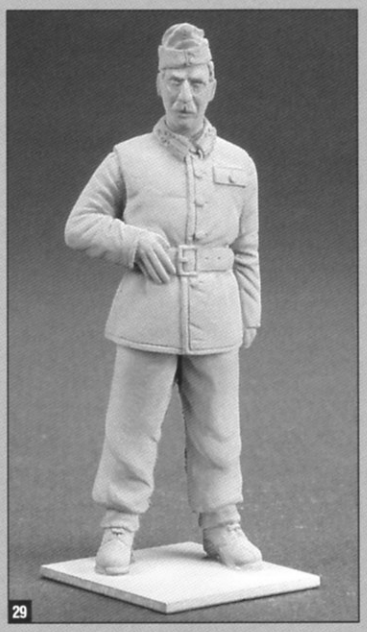
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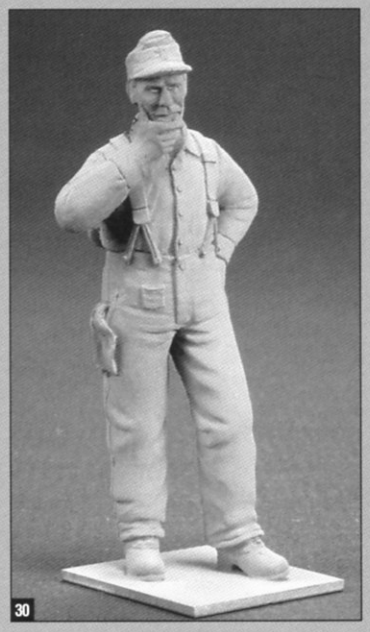
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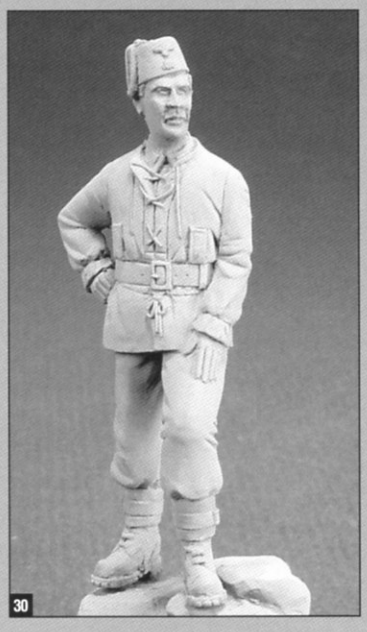
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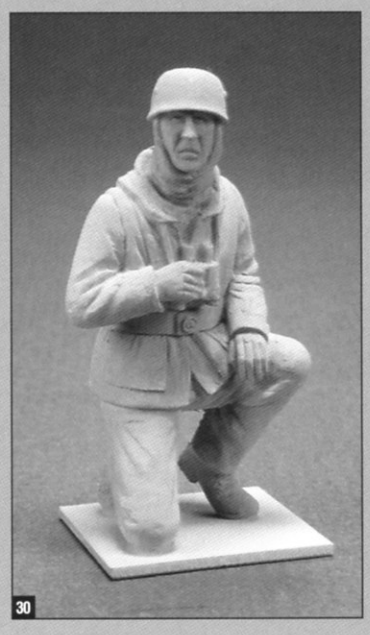
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Hungarian figures, here's one for you. **WSH24, Hungarian Tiger Tank crewman (29)**, is an interesting choice, featuring a stern-looking chap standing with one hand on his belt. He wears a leather jerkin over his tanker's uniform. This can lead to all sorts of interesting Tiger possibilities, as the Hungarians did field the big cat and their crews and tanks had a very unique look.

WSH25, German Army medic with SS tankman casualty (30), is a two-man set with a medic bringing in a wounded tanker. The tanker seems to be hanging on by a thread and presents a very well executed pose. Only the heads and the tanker's left arm are separate—everything else is a single casting. We like the careful scoring of the medic's Red Cross brassard. This makes it way easier to paint.

WSH26, Officer Panzer Division Nordland in winter coat (31), presents another German officer in the sheepskin coat. He wears the somewhat rare fleece-lined SS Einheitfeltmutze and holds a walking stick in front of him. It's a simple pose, but useful. He strikes us as the type who would ride in the new Tamiya Steyr command car.

WSH27, German Army/SS mechanic in shirt sleeves (32), is one we liked immediately. Here's a tanker who's name is probably German for Earl or Hank, rubbing his jaw while contemplating some project. There's a wrench in his top pocket and a rag in another. He wears mouse gray shirt and suspenders. The box art depicts him as having touched his face with grease on his hands and this would be a fun way to paint him up.

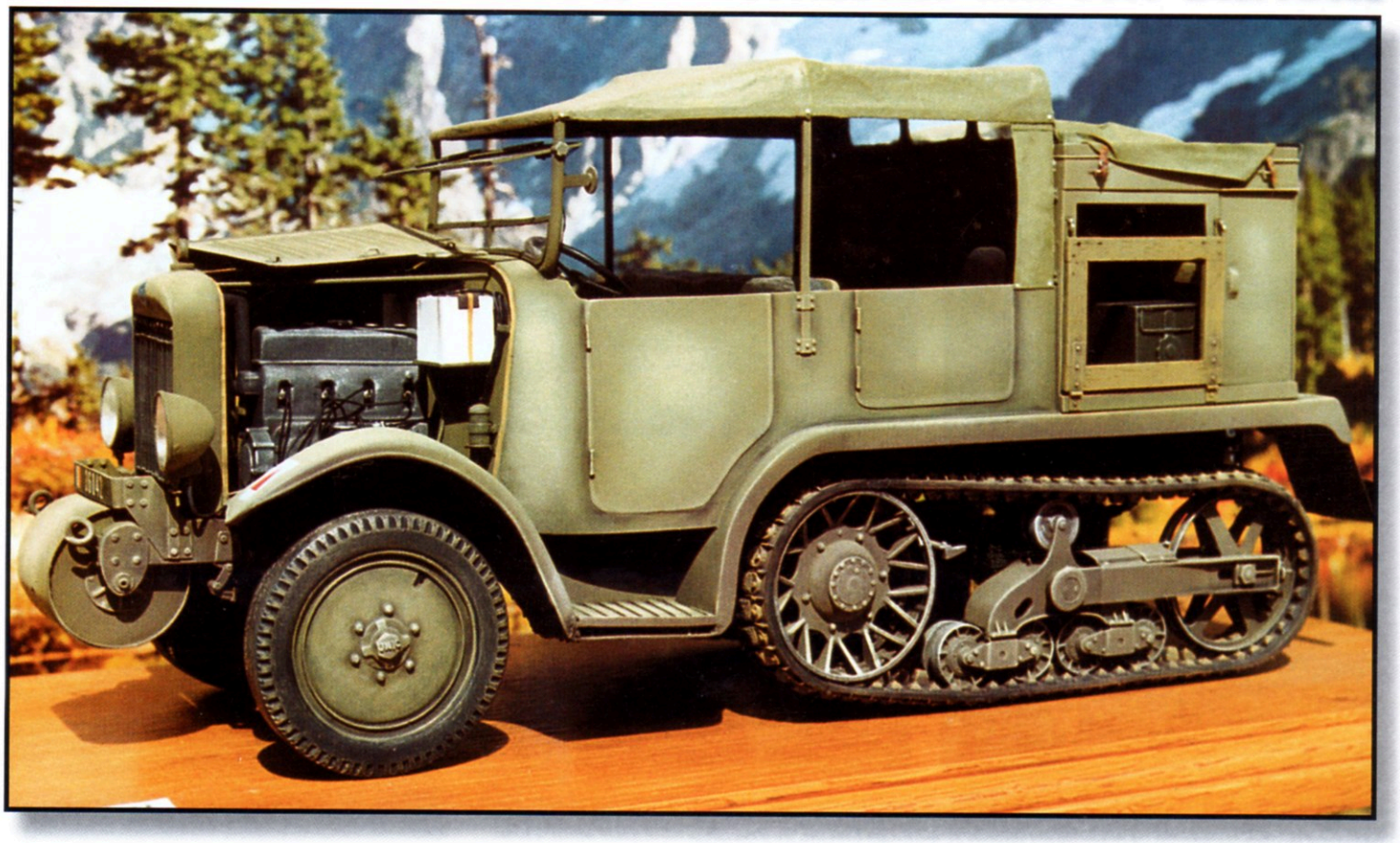
WSH28, Officer, SS Handschar Division in camouflage smock and fez (33), has a cocky looking fellow from the 13th SS Division, standing atop a rocky base. He's either SS cadre or one of the Bosnian Muslims recruited to do their dirty work—they were a bad lot. The inclusion of the base makes for yet another instant scene. Although he wears the heavy cleated mountain boots, a swap would still create some interesting possibilities.

WSH29, Fallschirmjager officer in winter clothing (34), has a kneeling paratroop officer in the white winter uniform, gripping a pair of binoculars. He's quite studious and posed for either a battle line or a conference.

All figures reviewed in the Mini-Men section are submitted by the manufacturers.

One UNIC, extra large

SOMETHING A LITTLE DIFFERENT, A SCRATCHBUILT UNIC P107 HALFTRACK



Photographs: Hervé Convoyette

Light tractor UNIC P107 PU was designed to tow guns of 75mm and 105mm. The P107 was the worthy successor to the earlier P17 half track. It was faster and more powerful with its four cylinder engine. It was equipped with the new Kégresse tracked suspension. That makes this vehicle very flexible and very quiet, features that I can confirm, having seen a working example of it circulating in France recently.

Production began at the end of 1937, with factories from Puteaux manufacturing 1,066 specimens of the artillery by the beginning of September 1939. Although the production ceased in June 1940, it was not the end of its use, because the German army still used this tractor for the remainder of the conflict as a tractor (Leichter Zugkraftwagen U 304 (F)) and later as an armored vehicle.

The Model

This model is not marketed in 1/15th scale, thus I set out to built it completely from scratch. Scratchbuilding, a term well-known in many international contests, means that the model was created of many parts, including found parts. For my part, true scratch building is where 100% of the model's parts are built by the modeler. I believe this because a found part is not completely accurate, which harms the realism of the model. For example, a wing nut for a German truck can represent a wing nut of an English vehicle well, even if the curves are not absolutely identical. When this is done the aspect of the finished model will always take a false form, even a very small one.

I much prefer to work in 1/15th scale because it allows a level of detail quite higher than the 1/35th scale. This larger scale allows parts to be built to maximum precision. Creating a series of precise parts in this manner will result in a very precise and accurate model.

The first phase of construction consists of building the frame. Having taken many photos of a P107 in the course of restoration, I decided to build my model much like the real vehicle. The particular form of the frame requires the greatest attention. Unless the frame is assembled perfectly to scale, it would be impossible to assemble the other parts of P107; the engine, gear box and the body work, but especially the complex system of the Kégresse suspension.

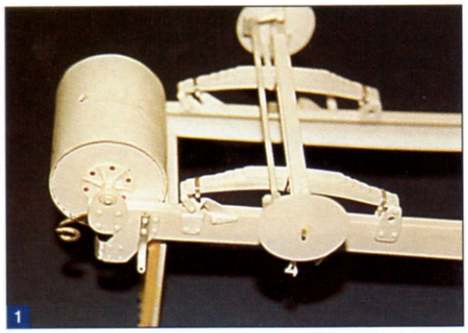
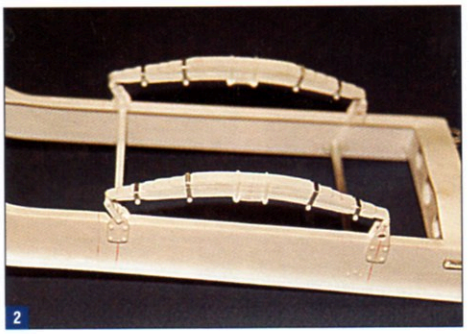
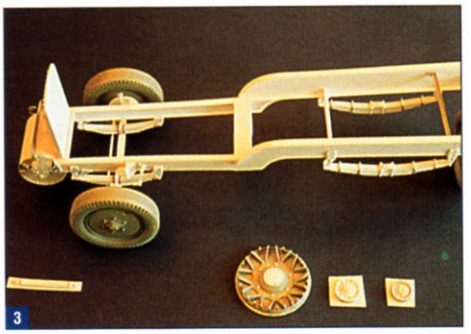
The materials used for its construction are primarily plastic card in sizes 0.5mm and 1mm, as well as sheet aluminum of 0.3mm.

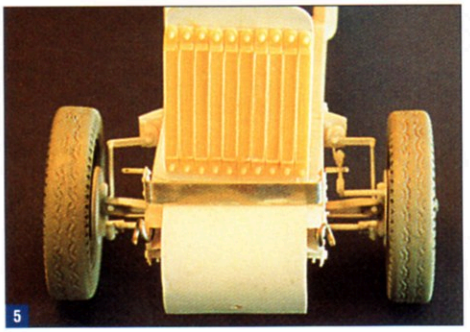
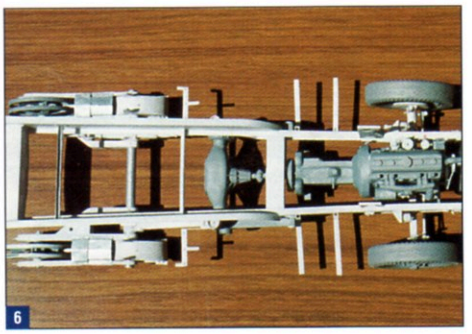
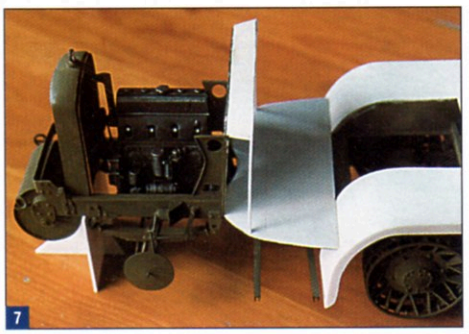
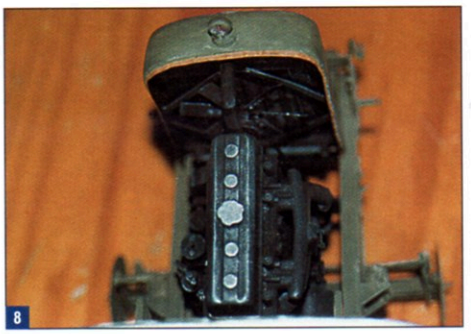
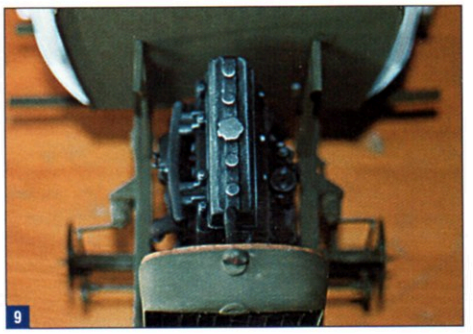
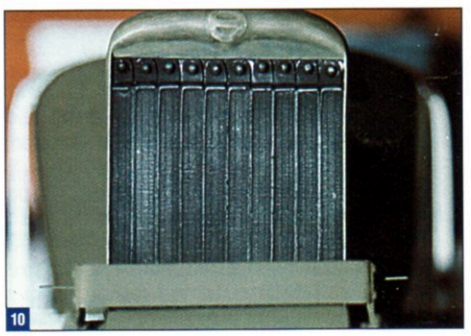
The frame members are assembled as follows. First, I cut out all the members with the desired dimensions on paper card, then I traced on plastic card of 4mm the curve which I wished for the contour of the frame members. This part, once cut out, will be used as gauge. It is better to fix the longest member first, letting the joint dry, before moving on. This is a very important step, as it is the joints of the frame which determine the strength of the finished model.

The second phase is the construction of the engine, the gear box and the radiator. All this is, of course, carried out according to the photos of the real vehicle. With regard to the radiator, it is actually composed of ten elements. I initially built a half element in plastic card. Fine grooves were carved to create the grid of the radiator. This element was then molded twenty times and assembled on a support of plastic card. The remainder of the radiator was formed from plastic and Duro putty. Duro is a putty made of two components which harden once mixed. It is also available under the name of Kneadatite.

The engine is also made from plastic card and Duro. Its cooling fan is composed of sheet aluminum plates of 0.2mm. The rivets of this propeller are made using a granulating tool, which is a type of punch which makes rivets of an incredible smoothness. To attach the rivets on the blades of the propeller, I used super glue. A very small drop is enough because too large a layer would be thicker than the rivet itself. Another method of attaching the rivets consists of using acrylic varnish (such as Tamiya) as an adhesive. This may be easier, but in my opinion it is less solid.

The engine, the gear box, the radiator and the frame are now finished. At this point it is necessary to complete the first phase of painting because certain parts will not be accessible for airbrushing and even less for brushing. The color that I prefer is the "late" French Artillery Green No. 179 from Humbrol which is, unfortunately, no longer available. It is

1, 2, 3. The frame under construction. I built up all the frame components from plastic card, which was cut from pre-cut paper patterns. The springs were made by laminating sections of plastic strip. They were then formed around a glass jar after heating them in boiling water. It was very important to get all these components right, as they would greatly effect the look of the finished model. 4. These are copies of my master patterns for the wheels and the drive sprocket, both cast in resin. 5. The front end starts to take shape. The radiator is actually composed of twenty elements, each cast in resin from a carved master. 6. The frame before painting. It is also important to prime the various components during the construction process. This helps to reveal any imperfections in the parts. 7, 8, 9. It was necessary to paint the model as it was built, as many of the interior areas would be inaccessible after construction. This is the finished and painted engine. It was built from plastic card and Duro putty. Also note the construction of the coach work, visible in photo 7. 10. The completed and painted radiator.

necessary to be a scientist today to create and obtain this color (help us Humbrol!).

The first brushing can be made at this stage, only for the most inaccessible parts. The third phase of assembly is that of the lower body work. Entirely made of plastic card, it will be adjusted perfectly on the frame, taking note of the particular shape of the floor in the back. It is said that a crew of three can sit in the back, but there appears to be little place for their feet, and only the middle crewman could place his feet in the normal way, the two others having a knee in the air!

The compartment door for the ammunition cases is made out of wood, as on the original vehicle. This makes for a very realistic surface quality. It is necessary to take care at the time of painting to give this area several layers. Wood has an annoying tendency "to drink" paint.

It finally remains to build the finest parts of the body work: the engine cowling, the fenders, the headlights, the windshield and the canvas cover.

I take care to manufacture these parts as precisely as possible, because it is they which will make the final quality of the model. This not to say that the other parts do not deserve a detailed attention. Quite to the contrary! But one especially needs to cover all the details in 1/15th scale, a scale which does not tolerate mediocrity. The engine cowling is out of sheet aluminum of 0.2mm; it is fine and very fragile because aluminum does not tolerate multiple bending. This is why I first create the part from a sheet of paper Bristol-board that allows me to adjust the forms and to envisage cutting the ventilation points. Once the Bristol-board part is perfect, I then make it out of aluminum.

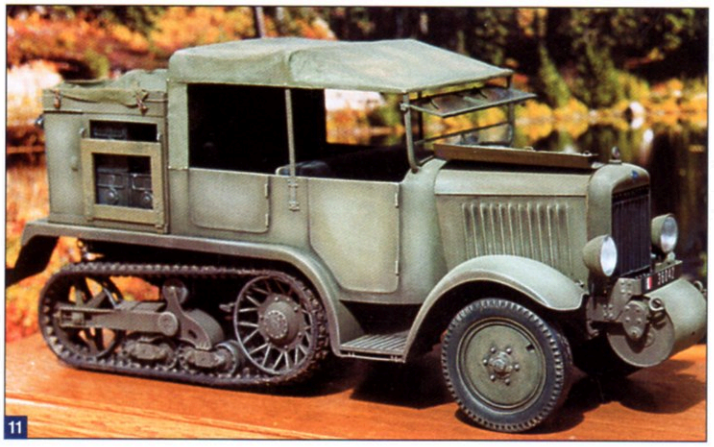
The engine cowling is composed of four parts and its left side is presented open so that one can see the detail of the engine. Wiring is a significant phase that one also should not neglect in 1/15th scale. I use different thickness' of brass and copper wire. The finest wire comes from miniature windings of small engines. I try to always respect the thickness of a scale for more realism. For example, a cable of .5mm of diameter will make 0.33mm in 1/15th scale and 0.14mm in 1/35th.

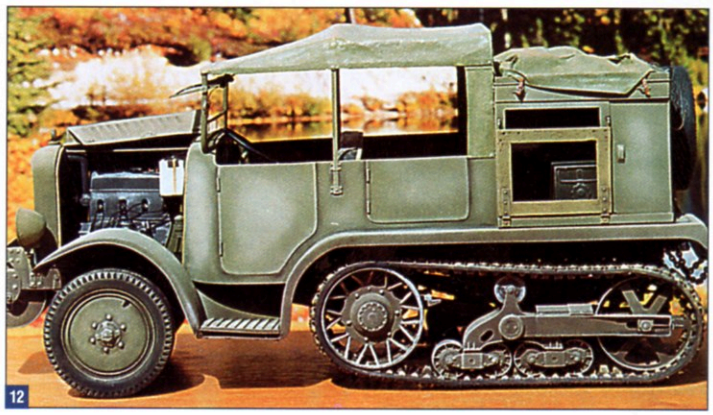
As for the headlights, they are vacuformed—sort of. A piece of wood is worked to make the master, then a pre-heated sheet of plasticard is forced down over the pattern and allowed to cool. The glass for the headlights is made out of transparent acetate. It is attached using a metal hoop, as on the original headlight, the hoops being formed from lead sheet. Two white color LED's will take the shape of the two light bulbs, after some gentle working with a diamond dust tipped grinding stone.

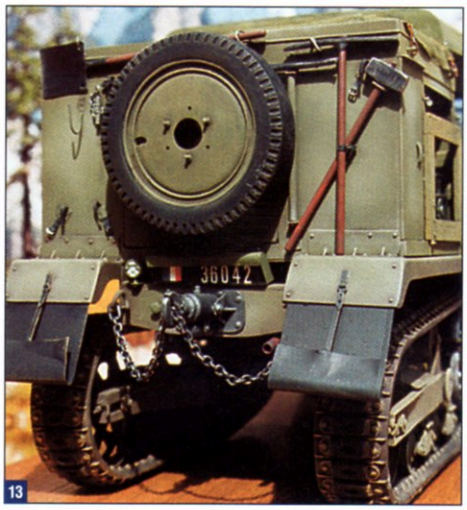
The windshield is in two parts and I decided to present it in the open position. Many photos taken in May of 1940 depict it this way.

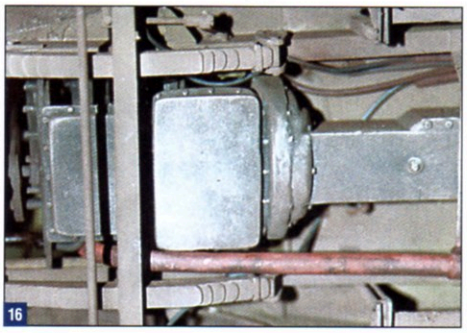
The caterpillar track links are molded out of resin, starting from a plastic master. This was then duplicated to manufacture the links. The elements on the inside face of the tracks were also duplicated in this fashion. The central flexible element is made out of paper.

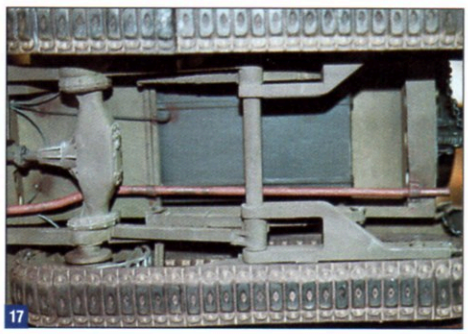
The final phase of painting is rather difficult. There are considerable subassemblies to paint, then











11, 12. Overall finished views. The tarps for the cab and the ammunition box are made from paper, coated in a mixture of white glue and water. The ammunition box door located at the back is made out of wood in order to preserve the texture of original materials. 13. The tool set fixed on the back panel. There is a lot of detail in this area, note for example the flaps retained by their straps, the chains and the fasteners for the tools. 14. This newspaper, which announces the declaration of war, is on the back bench of the cab. It is a reduction of a scanned original specimen. 15. The windshield is carried out in several parts. It is presented in the raised position, common in the spring weather of May/June 1940. The headlight housings were vacuformed and the bulbs are white LED's. 16. The finished undercarriage. Using photos of an original vehicle, I was able to represent all of the parts of the vehicle. Note the brake and electrical lines running along the frame. 17. The complete track mechanism. The tracks were made from resin cast parts and paper. The vehicle's fuel tank is in the center of the frame.

assemble with no trace of the joints appearing. The color used remains French Artillery Green Humbrol.

Having decided to paint my vehicle in a solid color, I create various nuances of this green (while adding white to it) to accent the curves of the machine. Then I will dry brush the model with light colors.

Contrary to the majority of model makers, I do not use any washes to create shading and weathering on a finished model. My technique is different. It consists of creating the shades with pastels. For this, it is necessary to get a whole range of pastels going from black to yellow ochre, while throwing in a few tones of green khaki and red brick.

The use of pastels requires more thought, because it is not possible to erase and start again. I apply pastel powder to where I wish to shade, using a 000 brush. I also use the pastels to simulate the traces of rust and layers of dust on certain parts of the model.

The tactical artillery badge, a red triangle on a white square, is painted using a stencil cut from airbrush masking material. I painted the white square with Humbrol. Three fine layers will be necessary for the white. Once completely dry (the enamel colors can mix, if not dry), I apply two fine layers of red.

The two number plates are first painted in white, then the small tricolors were painted with a stencil mask like previously. Then, dry transfers from Letraset were used to mask the figures. A thin layer of black was then applied. A piece of adhesive tape was used to remove the letters revealing beautiful white letters.

To locate the time of the model, I discovered a newspaper of the time period which announces the declaration of war. I scanned this into my computer and then reduced it to 1/15th scale. This small newspaper was then stuck on the back bench.

It took me a good year of work to build this model from A to Z. No part was overlooked, not even a bolt.

I'd like to make a point of thanking Mrs. Freres and Garnier for their pleasant collaboration. Without them, the model would not have been possible.

—Hervé Corroyette

MMiR RECCE

I relied almost exclusively on photos taken of a UNIC P107 undergoing restoration in France. Many of those are reproduced here. The following French language titles may also be helpful. Although they do not concentrate on the P107 alone, both contain some interesting in service photos.

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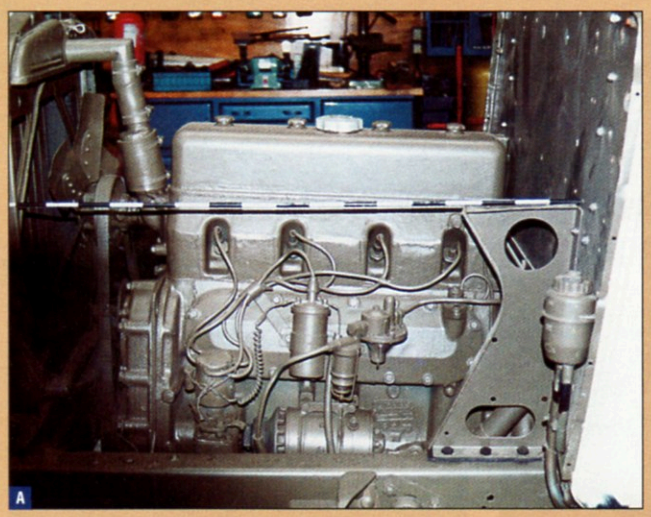
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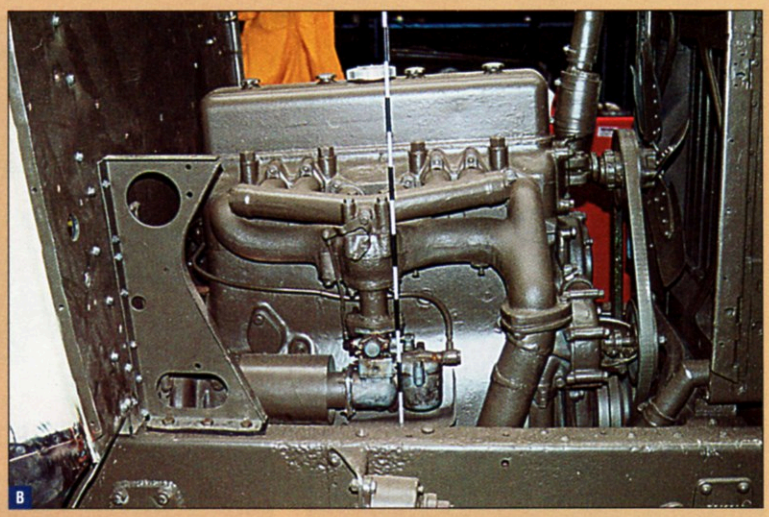
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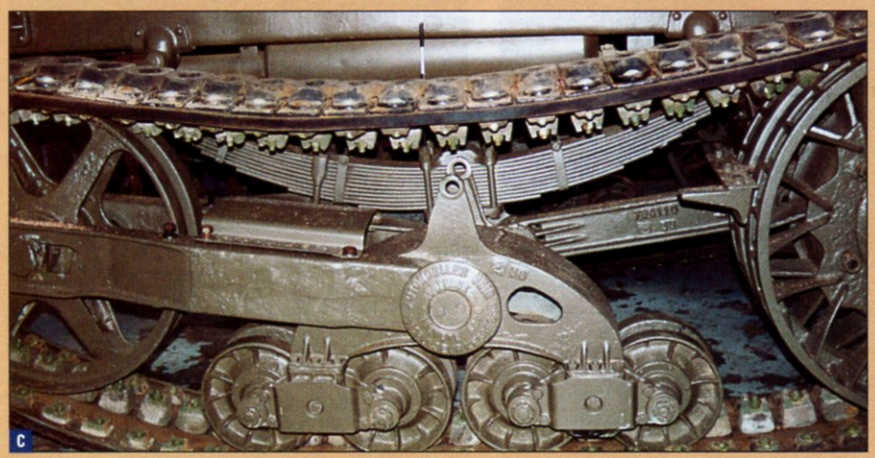
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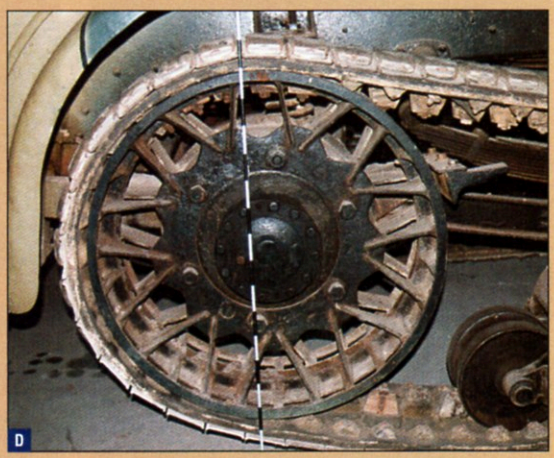
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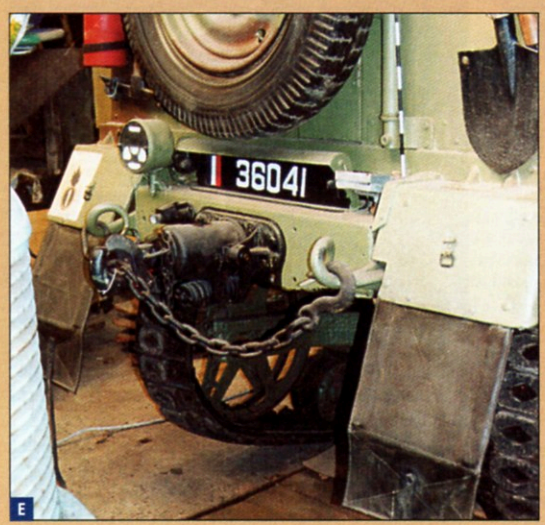

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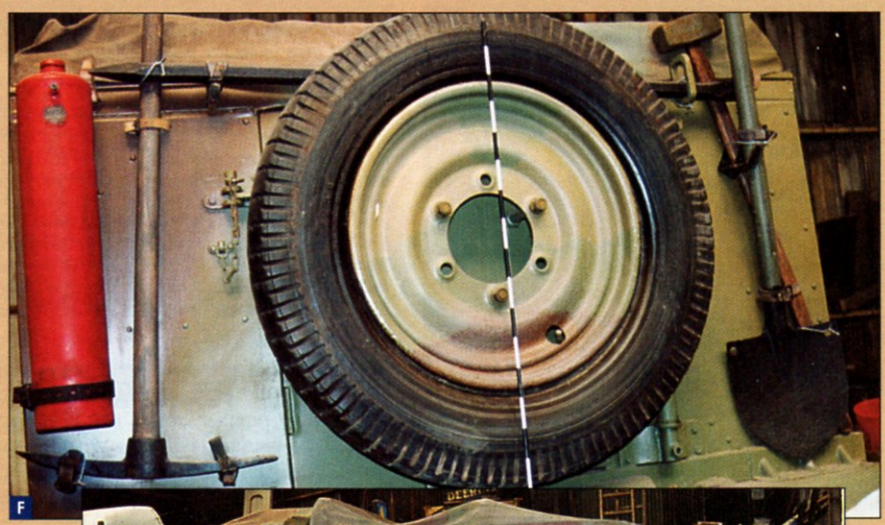
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These photos represent two privately owned vehicles in France. Both were photographed during different phases of their restoration. A) This is the left side of the engine, the firewall is to the right; radiator to the left. B) The right side of the engine. The segmented rod in the photos, marked off in centimeters, is to help me gauge the size of the various components. C) The track mechanisms, right side. The trailing idler is seen here lifted off the ground. This is the position for installing a track, which recently took place in this photo. D) The drive sprocket, left side. E) The rear towing pintle. Note the heavy sway chains, the rear tail light and the mud flaps. F) A close-up of the rear of the P107. This shows the tool stowage as well as the spare tire mount. G) An overall view taken from the right side. This shows the full set of foul weather covers installed on the cab. A very difficult to find item in modern day France! These replacements were made by hand, based on the originals. I decided not to add the side curtains to my model, in order to better view the interior. This is the same vehicle shown in photo C, note the position of the trailing idler.

Another missing Lynx

THIS TIME, IT'S THE TECHMOD KIT

Photographs: Joe Morgan

After years of no Luchs kits, but expensive and difficult resin ones, this past year saw the advent of two injection molded ones, one from ICM, from the Ukraine, and one from Techmod, from Poland. Number 17 of MMiR saw Chris Mrosko's review of the Ukrainian kit, and now here's mine of the Pole.

Luchs (Lynx) was a recon tank, designed to replace the PzII. A long gestation period meant the vehicle, finally introduced in 1944, was obsolete upon arrival; out gunned and outrun by M8 armored cars. Only 130 or so were built; a version armed with the 5cm gun (Leopard) was stillborn. (If you bought both kits, though, and don't want to build two Luchs, all you need is a Puma turret and some imagination to build a Leopard. That's what I'm doing with my ICM kit.)

The Kit

Casting of the Techmod kit is adequate, although somewhat dated compared to new Tamiya stuff. But what isn't? The parts are in white styrene, four sprues of parts, seven sprues of tracks, one photo-etched sheet, one piece of screen and a bit of plastic for a tow cable. The styrene is quite soft and flexible, an advantage when working on the stuff, a disadvantage on large parts like the hull.

The smaller parts are too amorphous to be used. I replaced all the tools and the taillight with Tamiya parts from the great PzIV set. The 2cm gun barrel was unusable, and replaced with a New Connections barrel. One of the fender braces was a short shot and had to be scratch built from sheet. Well, you see what I mean: let's get into it step by step.

Lower Hull

The lower hull is comprised of five pieces: lower hull plate, two sides, and the front and rear. There are no real mounting points, so the dry fitting is interminable. And you don't want to screw this up. Once I got the hull together, a noticeable bow was in the two sides. Like I said, the styrene is soft and flexible. This was remedied by the addition of two bulkheads, cut from .035 styrene. Even after this addition, there was still a wave in the sides.

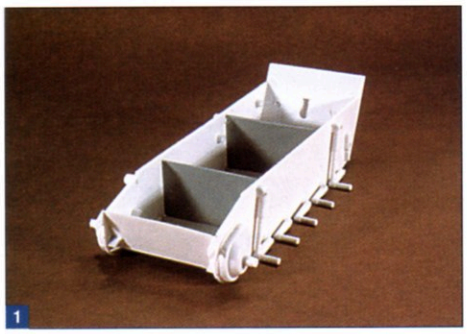
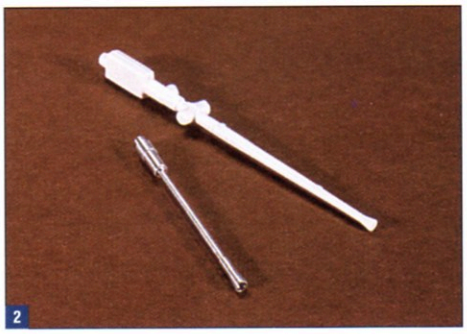
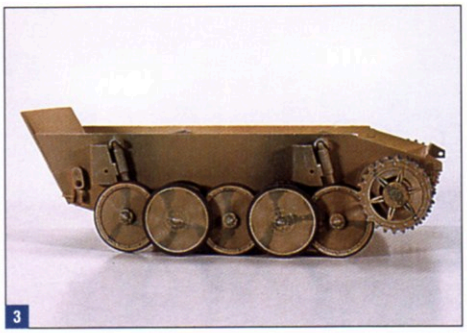
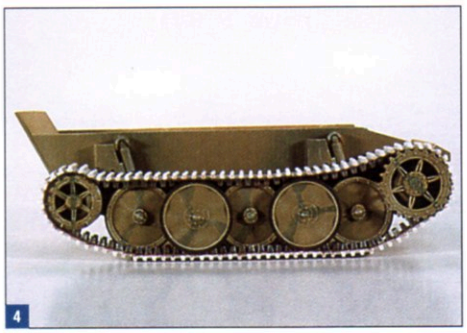
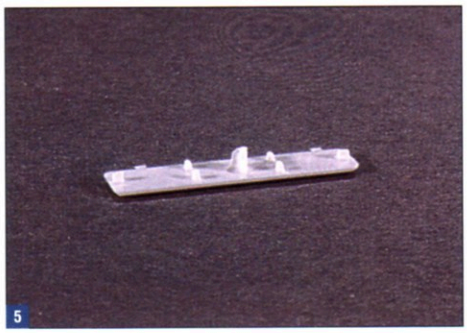
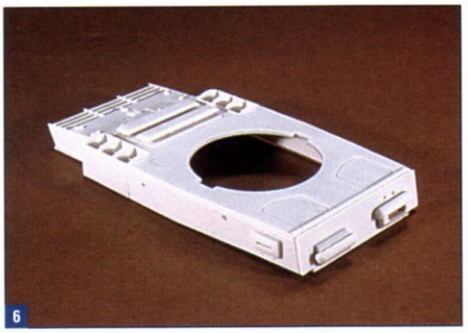
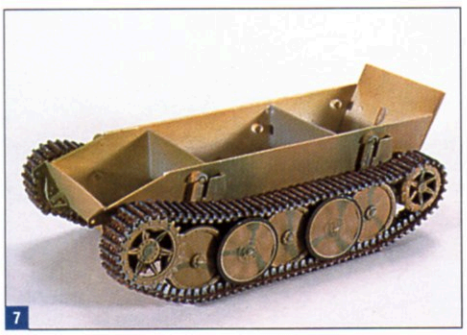
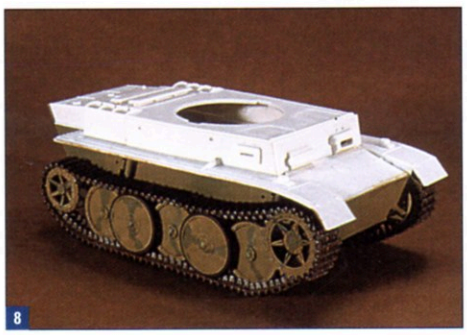
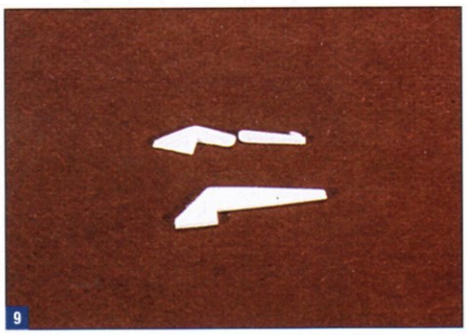
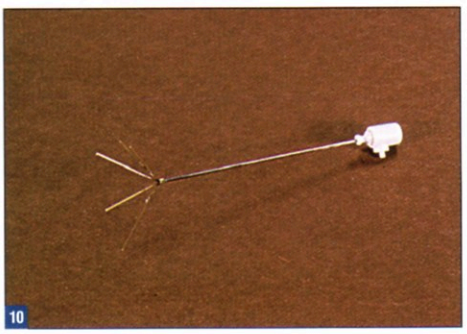
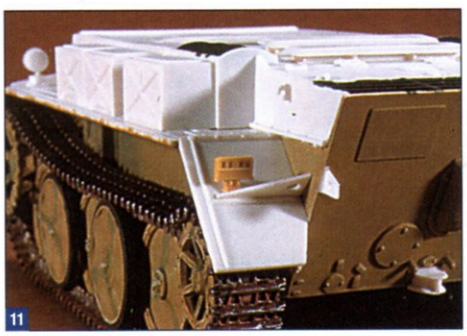
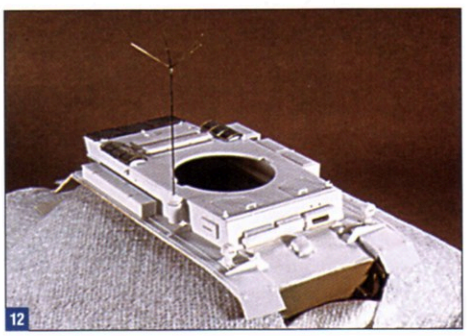
The running gear went together without a problem. The upper mounting hole for the shock absorbers on the front and rear torsion arms needed to be opened just a touch, but that only took a swipe with the rattail file. The idler mount can be positioned to take up the slack in the tracks, a nice feature that the larger manufacturers should adopt. The idler mounts are sided, too, so don't get the two sides confused. Don't forget to add the little tensioner on the idler mount, part B18. These parts are very fragile, and I broke one getting it off the sprue. Easy to scratch build a replacement, though.

Before adding the wheels, I painted the lower hull and the wheels, sprockets and idlers with Pactra Africa Yellow and bands of Pactra Medium Green. This green is, of course, much too bright, but this was solved with an over spray of the yellow.

At this point, the instructions and I diverged. They would have you wait until the last step to add the tracks, a recipe for disaster if I ever heard one. Following my usual practice, I added the tracks as soon as I had the lower hull and running gear together, before adding the upper hull.

The tracks are very nicely molded and are attached to the sprues by three attachment points. The soft styrene makes cleanup a snap, and the tracks have just enough of a friction fit to be an easy assembly. I used my modified Tony Greenland method of painting the backside of the tracks before assembly and then building the tracks in short sections on the vehicle. Paint on the outside is done after the tracks are in place. It was an easy individual link job, aided by the adjustable idler. They looked good on the tank.

Now the upper hull can go on, after the undersides of the fenders are painted. This part, in contrast to the norm in armor models, was made up of five parts: the glacis and fenders, front plate with the driver's visor and dummy visor, two side plates, and the hull top. Again, a lot of dry fitting was necessary, but the end result was OK. While the plans show installing the glacis/fender combination first and then building the upper hull on it, I assembled the parts before fitting to the hull, giving me a more conventional assembly. I needed just a bit of putty where the glacis met the front plate; at the rear the fit was perfect.

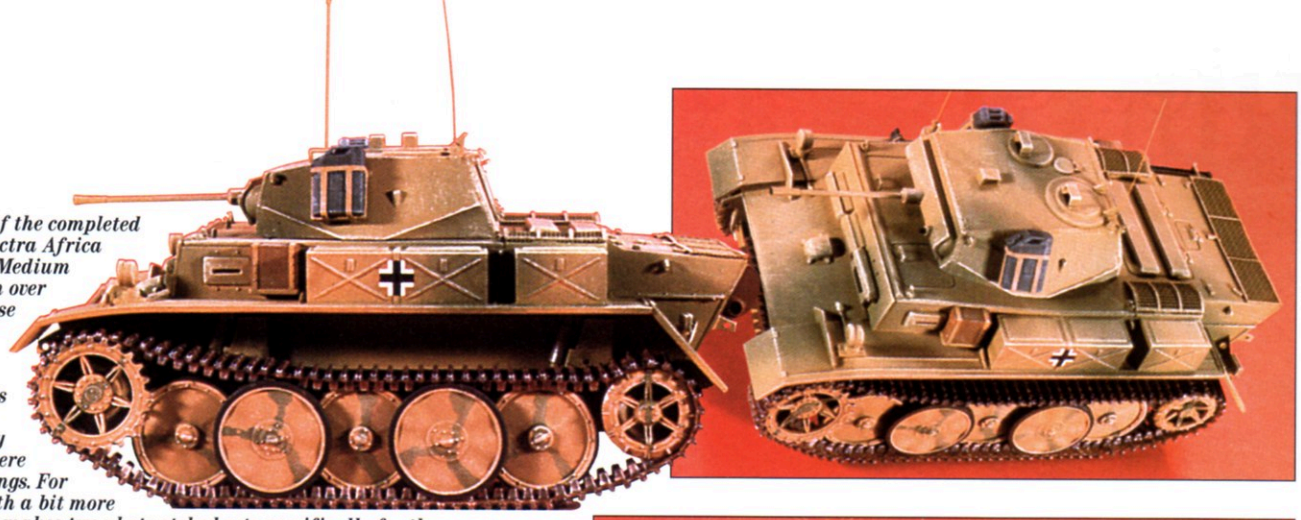
1. The lower hull with the two bulkheads in place, added to prevent the sides from flexing. 2. The awful kit gun barrel with the New Connections one below; not much of a choice here. 3. Lower hull, painted, with running gear (except the idler) all in place. Fit here was quite good. 4. Lower hull with running gear and tracks in place. Note the outside of the tracks has not yet been painted. 5. A lot of the parts were marred by these large overpours. 6. The upper hull, constructed from four parts. 7. Lower hull and running gear with tracks installed and painted. Clearly visible are the two hull bulkheads. 8. The upper hull with glacis and fenders assembled to the lower hull with tracks. Don't forget to paint the underside of the fenders! 9. One of the front fender braces was a short shot, but it was easy to fabricate a new one from styrene using the other one as a pattern. 10. The hull antenna, with its rotating armored pot, was easily the nicest part of the kit. I did replace the antenna mast with wire. 11. The back of the hull with the rear fenders installed. Note on the left side is a Tamiya taillight, replacing the poorly cast kit one. 12. With the tracks masked off, the upper hull is ready for paint. Notice the nice crow's foot antenna.

There are two cast on fender braces about midpoint of the hull and neither of these fit up against the hull, showing a gap of about .005. I disguised these by the judicious application of tools from the Tamiya set, a jack block on the left side, and a fire extinguisher on the right. I don't know where the real Luchs carried these items (maybe in the stowage boxes?) but they needed 'em, and so did I. Part A25, the front fender brace, was the aforementioned short shot, so I built one from .020 styrene, using A24 as a pattern.

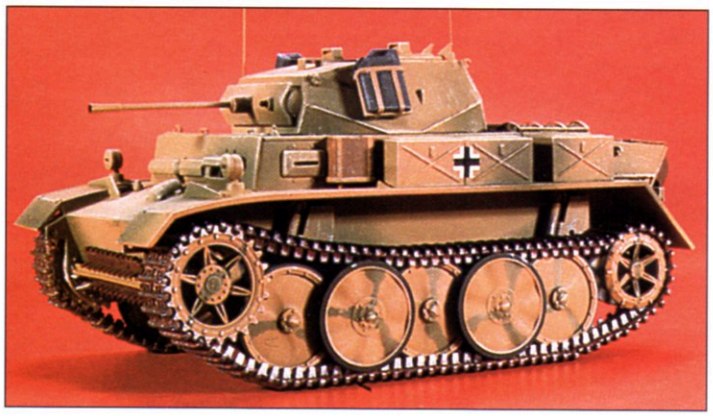
During the upper hull assembly, I added all the parts I could before attaching it to the lower hull. This included the driver's hatches, the engine hatch, with its armored vent covers, view slots, lifting hooks, the vent cover on the glacis (part C24), and the real and dummy visors. Lights, wiring, stowage boxes and rear fenders went on after joining the hull parts.

The tools and the hull antenna were painted and assembled and set aside. The antenna is made up of four parts; the pot that attaches to the hull side (and swivels on the real thing); the antenna mount itself, that fits inside the pot; the mast, which I replaced with fine wire and the photoetched crow's foot. I intended to replace the last with an Accurate Armour part, but thought I'd try the kit on first. It worked great, once I was able to bend the bottom part around the mast. It is extremely delicate, though, so be really careful.

The air intakes and exhausts, the areas to be covered by the grills, need to be painted black. Since the one at the rear is open, I worried about light leaks, but there were none. It looks as dark as the caves of Pluto down there. If you built the kit without the hull bulkheads, though, you might have a problem. Of course, this whole question would be



Various views of the completed vehicle with Pactra Africa Yellow/Pactra Medium Green paint. An over spray of the base coat muted the green, which starts out too bright but looks right with the over spray. Only Balkankreuz were used for markings. For those of you with a bit more ambition, Aber makes two photo-etched sets specifically for the Techmod Luchs. One is for the general details and one is exclusively devoted to the fenders. The general detail set is one of the most comprehensive photo-etch detail sets I have ever seen. Composed of hundreds of parts, it could either be your dream come true, or your nightmare!



rectified by the addition of an engine, and with the state of the after-market parts scene right now, how long can it be before one comes along?

There are templates provided for the grills, and photoetched frames to go on top. The templates are only close at the rear. The two side templates are shown as the same size. However, the openings they cover are not, and once you cut the things out and discover the mistake, there's not enough screen to do another. Bummer. Drag out your screen assortment and pick the closest you can, like I did. Doesn't show up too bad after paint.

The frames are really flimsy, making them hard to work with. They do have rivets or bolt heads or something made into them, so you don't have to dip into your Grandt Line stuff. I wasn't crazy about how these things looked. The frames seemed to be way off the plastic, with the thick screen in there. Maybe this is the way the real thing looked, but I thought a one piece photoetched grill/frame combo would look better.

However, you do have to get into the Grandt Line for the spare track brackets. The end parts, B26, bear no resemblance to the drawings, and I couldn't figure out how they were supposed to mate up with the front tow brackets. I substituted a bit of Plastruct angle, with Grandt Line bolt heads at each end. Looked good to me.

The muffler was also assembled and painted separately and set aside. Dry fitting showed that a gap existed where the exhaust pipe exited the rear plate. I fixed this with a styrene washer, thinned down to fit and flattened on the backside to fit against the hull.

The Turret

After adding the front and rear plates to the turret (both of which are, interestingly enough, labeled "C13" in the plans), I added weld seams around their joints with putty, sculpted with my knife blade. A rudimentary breech is provided, but that's all the interior detail in the turret. Since the barrel was a joke, all that fell by the wayside. The mantlet was drilled for the metal barrel. While I was drilling on this part, I drilled out the machine gun muzzle. Part A5, the turret floor, did not fit the hull, and had to be reworked to fit.

With no interior, I closed up the turret. The hatch openings, both of them, had to be slightly opened up to accommodate the hatches. Some work had to be done on the rear plate, as the hatch didn't fit between the hinges. All the rest of the turret parts were then added, including some nice hatch rests on the commander's hatch. The periscope guards were all marred by large circular bits of excess plastic on the inside, but were easily cleaned away with a file. The jerricans and racks were painted separately and set aside to be added after the final paint.

Paint and Markings

Like the lower hull, the finished vehicle was painted with Pactra Africa Yellow, with splotches of Pactra Medium Green. After the green was applied, the tank was lightly oversprayed with the base coat, muting the green. The model was then drybrushed with Pactra Light Tan. The German crosses were the only markings I used. I opted not to try to get the numbers to settle down over all the turret details. This is clearly a job where stencils are required.

Conclusion

This is a very nice kit, prone to the regular eastern Europe glitches, but easily workable for anyone with some experience. And it builds into a model that accurately represents the real vehicle at an affordable price. Now what am I going to do with the Verlinden kit I've got and never had the balls to tackle?

—Joe Morgan

MMiR RECCE

Techmod PzKpfw, II Ausf L "Luchs." Kit number 3004. Kit graciously provided by Techmod's U.S. importer, Stevens International. Suggested retail price $38.95.

References

The references listed by Mrosko in his review are the ones I used. Here they are again.

Panzers in Saumur No. 1, Dai Nippon Kaiga, 1993. ISBN: 4-499-20543-3. Tons of color pictures of the fully restored (and running) Lynx located at Saumur.

Ground Power Magazine, February 1996 (No. 21), Delta Publishing Co., Ltd. A tough one to locate and in Japanese (although the pictures are in English...), but worth it if you can find it. Excellent shots of the Lynx deployed in combat. Check with Legends Toys and Hobbies. They are known to stock all the Ground Power titles.

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